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THE
EIGHTH EXHIBITION
OF THE
Mass. Charitable Mechanic Association,

AT FANEUIL AND QUINCY HALLS,

IN THE CITY OF BOSTON,

SEPTEMBER, 1856.

BOSTON:
PRESS OF GEO. C. RAND & AVERY,
NO. 3 CORNHILL.
1856.

GOVERNMENT OF THE ASSOCIATION

FOR 1856.

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THEOPHILUS BURR,
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The Government of the Association, organized as follows, constituted the

BOARD OF MANAGERS OF THE EXHIBITION.

EXECUTIVE COMMITTEE.

FREDERIC W. LINCOLN, Jr.
Chairman.
JOSEPH M. WIGHTMAN,
HENRY HUTCHINSON,

JOSEPH L. BATES,
Secretary.
OSMYN BREWSTER,
L. MILES STANDISH,

HOLMES HINKLEY.

COMMITTEE OF ARRANGEMENTS.

JOSEPH M. WIGHTMAN,
Chairman.
FRANCIS B. WINTER,
ISAAC HAZELTON,
SIMON G. CHEEVER,
SAMUEL D. BATES,

THACHER BEAL,
Secretary.
OTIS TUFTS,
BENJAMIN BRADLEY,
THEOPHILUS BURR,
MOSES HUNT.

The Executive Committee are to prepare all circulars and advertisements; to appoint the Judges and give them their instructions, receive and examine their reports; and award the premiums to the contributers.

The Committee of Arrangements have the entire charge of the Halls of Exhibition; the reception, preservation and display of all the articles contributed, and attend to the delivery of them at the close of the Exhibition. They are to prepare such rules and regulations as they may deem expedient.

The Vice President, as Chairman of this Committee, is to exercise a general superintendence of this department; nominates all committees of sections, clerks, police, and other assistants, which may be necessary, subject to confirmation by the Committee.

RULES AND REGULATIONS OF THE EIGHTH EXHIBITION.

I.

Articles intended for exhibition and premium should be delivered at Quincy and Faneuil Halls, on or before Saturday, September 6th, 1856. A Check for the same will be given, which must be presented when the articles are returned.

II.

Apprentices entering articles of their own production, if required, must give a certificate from their employers, stating their names, ages, and the time they have served.

III.

Articles intended for sale will be labelled accordingly, but cannot be removed until the close of the Exhibition, except by written permission of the Committee of Arrangements.

IV.

A proof of origin must be furnished, if required, for every article offered for premium.

V.

A Board of Judges will be appointed, to examine all articles presented, and the Executive Committee will award premiums on such articles as the Judges shall declare most worthy. The premiums to be delivered as soon as they can be prepared.

VI.

The morning of each day, until nine o'clock, will be appropriated to the Judges; and no other person will be admitted during the time thus appropriated.

VII.

Steam power will be provided, that machinery of all kinds may be seen in actual operation; and the Managers respectfully suggest to inventors and proprietors, that this arrangement will afford an invaluable opportunity for displaying the advantages and capabilities of their various machines, in competition with others, under one view; so that there can be no question as to their relative merits.

VIII.

It is particularly requested that every person who offers a new machine, or an improvement on an old one, will leave at the Clerk's office a description of its peculiarities, that the attention of the Judges may be called thereto. Contributers or Judges desiring to communicate with each other, will leave their communications with the Clerk at the central office.

IX.

Whenever the articles will permit, the Contributers are requested to exhibit their goods in glass cases. All articles deposited will be at the RISK OF THE OWNERS. The most effectual means will be taken, through the agency of the police and otherwise, to guard and protect the property in the Exhibition; but the Managers cannot be responsible for losses that may be occasioned by theft, accident, or damage of any kind.

X.

Gunpowder and Fireworks will not be allowed in the halls; and the managers reserve the right to reject any article that they may deem objectionable.

XI.

Owners or agents, offering articles for premium or exhibition, will receive tickets of admission; *which are in no case transferable.* If transferred, the right of admission will be forfeited.

XII.

All persons intending to contribute to the Exhibition are requested to inform the Secretary in regard to the article, and the space required, previous to August 10, if possible; and all persons wishing for more particular information can address JOSEPH L. BATES, Secretary of the Association.

INSTRUCTIONS TO THE BOARD OF JUDGES.

The Judges are invited to examine with great care, every article submitted to their inspection, and to make such report as its merits may, in their opinion, warrant.

There will be four grades of award, viz. :—

No. 1. A GOLD MEDAL, which will be granted only for very valuable and meritorious inventions or improvements.

No. 2. A SILVER MEDAL, for articles of superior workmanship, new applications of material, and improvements in construction.

No. 3. A BRONZE MEDAL, for articles of superior workmanship, but of less importance or utility.

No. 4. A DIPLOMA, for all other articles deserving a favorable testimonial.

Each Committee of Judges will appoint their own Chairman, and notify the Secretary of the same; and report through their Chairman to the Executive Committee, *on or before Saturday*, Sept. 20th.

Each Committee will receive a book containing a list of the articles they are to examine, and also a book in which to write their reports.

Should the Judges require the attendance of a contributer, for the purpose of explaining an article submitted, they will please give notice at the office in Quincy Hall.

The Halls will be open for the Judges each morning, from half-past 7 to 9 o'clock.

Should any vacancy occur in the Board of Judges, it is desired that notice may be given to the Executive Committee without delay.

It has always been the wish of the Board of Managers and of the contributers, that the awards of Premiums may be announced before the close of the Exhibition; the Managers have not heretofore been able to do this, in consequence of the delay of the Judges in sending in their Reports. It is, therefore, earnestly desired that the present Board of Judges will send in their Reports on the day above specified, to enable the Managers to effect this desirable object. The office of the Executive Committee will remain open as late as *nine o'clock*, on the evening of the 20th Sept. to receive them.

N. B. Whenever a Medal is given, it will be accompanied with a Diploma.

DESCRIPTION OF THE NEW DIPLOMA.

DESIGNED BY HAMMATT BILLINGS, AND ENGRAVED ON STEEL BY S. A. SCHOFF.

In the centre, upon a high dais, stands Pallas, (Minerva,) holding in her right hand a wreath, and with her left resting upon a shield bearing the insignia of the State of Massachusetts; at her left hand is Justice, pointing out those worthy of the rewards of Skill and Industry; and on her right sits a Scribe recording their names.

On the left of the principal group a procession of artisans approach, with specimens of their handicraft, as candidates for the prizes; on the right, corresponding to these, are figures representative of the Fine Arts, Music, etc.

The back ground is occupied by an Exhibition Hall, filled with various objects of manufacture, and a crowd of visitors.

In the centre, below the principal figures, is the crest of the Association.

REPORT.

At the last Annual Meeting of the Massachusetts Charitable Mechanic Association, the Government were invested with full powers to hold an Exhibition of American Manufactures and Mechanic Arts, under the auspices of the Association.

Acting as a Board of Managers, the Government immediately organized themselves into appropriate Committees; and, in the usual manner, by circulars, advertisements, and other means, endeavored to awaken public attention to the subject.

The successful result which crowned their efforts, was seen in the large number of contributers who so readily availed themselves of the opportunity to exhibit their skill and workmanship, in their several departments of labor, affording a gratifying spectacle to the thousands of visiters who thronged our halls during the Exhibition.

While most of the other institutions which hold these Exhibitions receive direct pecuniary aid from the respective states and cities in which they are located, their success being considered so intimately connected with the development of their industrial resources; and while, even in our own commonwealth, Agriculture receives its fostering care, by its legislative gratuities to the different county societies, to aid the farmer in his peculiar work, the encouragement of the mechanic and his vocation is left, in a great measure, to our Association. Thus far the public has sustained us, and furnished the means for a liberal award of premiums, and a generous expenditure in behalf of those who are doing so much, by their inventive powers and mechanical skill, to advance and elevate the interests of American industry.

These Exhibitions have now become one of the permanent institutions of our times. They afford an opportunity, not otherwise obtained, for the ingenious mind to become acquainted with the various improvements of the age; the latest discoveries in science, and the most recent application of them to the useful arts are brought to view; and, by the system of awards, which stimulates to excellence, and by the reports of competent and impartial judges,

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true merit becomes appreciated, while the worthless and impracticable is condemned.

In addition to the social influence which the contributers themselves exert upon each other, by thus being brought together, they derive a direct pecuniary benefit, as their works are thus brought to the knowledge of the great mass of the people, and an easy market is secured for their introduction and sale.

This Exhibition was the Eighth that has been held under our direction; and we may congratulate the Association upon its success. It exceeded all those that have been previously held, in the number and character of the contributions, as well as the patronage of the public. The space we occupied was larger than usual. In addition to Quincy and Faneuil Halls, the upper hall, with the adjacent armories, were devoted to the Musical Department, making a grand exhibition in itself; while such was the display in the Machinery Section — always one of the most interesting features of the Exhibition — that we were forced to curtail the space usually alloted to Agricultural Implements and Heating Apparatus. Although there was such a multitude of tastes and wishes to be consulted, yet, we believe that the contributers were generally satisfied and pleased with our arrangements for their benefit.

The Exhibition was in operation three weeks, having been opened to the public on Wednesday, September 10th, and closed on the evening of October 1st.

The number of contributers was seventeen hundred. The articles exhibited far exceeded this number, as many were included under one invoice.

It was estimated that about one hundred and fifty thousand persons visited the Exhibition. It was thought expedient by the managers to issue a larger number of complimentary tickets than usual, in order to secure the co-operation of all classes of our citizens in its objects. These tickets were highly acceptable, and the privileges afforded enjoyed by the recipients; and were considered as an indication of the liberal public spirit which actuated the Association in carrying forward these Exhibitions.

The Reports of the Judges will be found in the following pages. It is one of the most gratifying facts connected with our Exhibitions, that we are enabled to enlist so many gentlemen of experience and worth in this duty. When we consider the amount of time that it requires, the patient investigation, and often perplexing nature of the task assigned to them, the impartial balancing of the claims of rival competitors, often receiving censure and blame from parties who are disappointed, we cannot but express our obligations and thanks to those who have so willingly devoted themselves to this service.

There is no institution in the country, and probably none in the world, where so much care and discrimination are used. Our reports are considered with many as standard authority in their several departments. They furnish, in themselves, a good abstract of the relative merit of the inventions and improvements of our day; and will be a lasting memorial and record of our encouragement of American Art, and of our efforts to reward the most meritorious of those who have been engaged in its service.

It may be stated in this place as an interesting and significant fact, that we have had, recently, many applications for complete sets of our Reports, from scientific men, who desired them to form a permanent place in their own libraries.

The awards have been as follows :—

Gold Medals,	25
Silver "	168
Bronze "	174
Diplomas,	375

As a Diploma accompanies each Medal, the whole number of prizes awarded amounts to 742*

A new and original Diploma, designed by Billings, expressly for the Association, will be given to the successful contributers. The managers exceedingly regret that circumstances beyond their control have caused a delay in their distribution. The work was put into the hands of the engraver nearly two years since, giving, as it was thought, ample time to complete it in the most perfect manner. It will, probably, be one of the most elaborate and highly finished steel engravings that has ever been executed in this country. A member of our Association, Mr. S. A. Schoff, is executing the work. It is hoped that its merits, when completed, will, in part, compensate our friends for the delay to which they have been subjected.

It has been our custom to connect with our Exhibitions, an entertainment of a literary and festive character. This occurred on the evening of September 24th. An Address, by Professor Huntington, of Cambridge University, with other appropriate exercises, took place at the Tremont Temple. The address sustained the reputation of its gifted author, and is one of the most suggestive and eloquent of the productions to which these Industrial Exhibi-

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* As an illustration of the greater extent and higher character of the articles in this Exhibition, compared with that of 1853, we present the following list of awards then made:

Gold Medals,	22
Silver Medals,	121
Bronze Medals,	106
Diplomas,	240
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tions have given occasion. It has been printed, and will be found annexed to this Report. After the public services, the Association, with the Board of Judges, invited guests, and delegates from other societies, participated in a levee at the Revere House. At the levee there was a mutual interchange of kind feelings between the Association and its guests; which served to quicken a tender regard for each other's welfare, upon the part of our own members, as well as to strengthen fraternal sentiments towards kindred organizations.

The statement of the receipts and expenditures, on account of the Exhibition, will appear in the Treasurer's Annual Report.

Having thus finished our labors, as connected with the Eighth Exhibition, the managers would express their gratification at the opportunity which has been afforded them of doing their share in advancing the interests and promoting the welfare of our cherished institution. Owing to the limitations of our official tenure of office, each Exhibition is carried on in a great measure by different individuals. Every three years our Board of Trustees is changed. While there are some disadvantages arising out of this system, yet, it has its merits, as it affords a larger number of members an opportunity to become acquainted with the details of the operations of the Association, and, at the same time, distributes in more equal measure, the responsibilities and honors of office.

With the hope that the efforts of the managers of the Eighth Exhibition will be as acceptable to the Association, as have been those of their predecessors, they respectfully submit the foregoing Report.

FREDERIC W. LINCOLN, Jr.,
Chairman.

Boston, December 5th, 1856.

REPORTS OF THE JUDGES.

REPORTS OF THE JUDGES UPON THE VARIOUS ARTICLES EXHIBITED AT FANEUIL AND QUINCY HALLS, AT THE EIGHTH EXHIBITION OF THE MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION, CLASSIFIED UNDER THEIR PROPER HEADS, WITH THE NAMES OF THE JUDGES, AND THE AWARDS OF THE COMMITTEE ON PREMIUMS.

MACHINERY AND NEW INVENTIONS.

EBENEZER BRADBURY,
SAMUEL COOPER,
WILLIAM MASON,
GARDNER P. DRURY,
FRANKLIN DARRACOTT,
JOHN H. THORNDIKE,
L. A. CUTLER,
INCREASE S. HILL,
WM. A. BURKE,
WILLIAM PARKER,
ALBERT S. ADAMS,
Judges.

THE duty assigned to your Committee, though an interesting task, is a delicate one. To decide upon questions of inventive merit, is among the most difficult problems of mechanical jurisprudence; and in the department of judicial investigation, has been aptly termed the "metaphysics of law."

Aware of the nature of their task, and impressed with the interest and anxiety of inventors and exhibiters, we have been pleased to find, on examining precedents, that questions of legal and equitable rights have not been deemed within the province of your Committee.

Concurring with our predecessors, as to our jurisdiction, our inquiries have been confined exclusively to the nature and merits of the improvements submitted for our examination. We have, in all our commendations, endeavored to avoid needless disparagement of inventors and inventions of less merit. We have felt desirous that unsuccessful exhibiters should go from the ordeal, to which they have voluntarily submitted, unprejudiced, as far as possible, in their equitable rights and their feelings, and satisfied of the justice of our action.

It is a law of the human mind to become partial to its own productions, and measurably blind to defects apparent from other points of view. It is the mission of this Association to guide, as well as encourage merit, and its most beneficent labors may be those that indicate the road to excellence by beacons along the by-paths of mechanical aberation.

If merit has been overlooked, your Committee are consoled by the reflection that the proverbial perseverance of inventors will very soon produce solid evidence of the fact, and that no serious mischief will result from their errors.

It has been a source of gratification to your Committee, to witness the continued evidence of the indomitable and active spirit of invention that characterizes the mechanics of our community, and of the prevalence of clear and just views of the principles of mechanical philosophy, by which they are guided in their search after improvement.

The progress of mechanical enterprise is accelerated by its own success, in multiplying facilities for further investigation and experiment; and the mechanical inventor of the present day has a faint idea of the trials of his predecessors. It is within the memory of mechanics yet on the stage, that many of the valuable and successful experiments of the present day, could not have been carried out for the want of facilities now multiplied on every hand. Abortive and costly experiments are constantly diminishing, while successful and valuable improvements are continually multiplying. And the evidence afforded of the onward progress of mechanical skill and invention, by these Exhibitions of the Association, is of the most satisfactory and demonstrative character.

Your Committee have been gratified by the intelligence, gentlemanly deportment and courtesy of exhibitors, and proud to see a union of mechanical skill with general intelligence and gentlemanly bearing not easily conceived of in communities destitute of free education and free institutions.

1. JULIO H. RAE, *New York*. Self-Distributing Card Rack. A series of boxes arranged in a frame, for holding business cards, which may be withdrawn, one by one, those behind being forced up by followers and springs to take their places. These frames are suspended in the offices of public

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houses, and are a novel and ingenious means of advertising. The cards are easily renewed as the boxes are exhausted. *Diploma.*

7. William Defreese, *Boston*, by N. B. & N. A. Doggett. Piano Forte Makers' Bow Drill. A good article.

14. William U. Dame, *Boston*. Improved Self-adjusting Wind Engine. An ingenious arrangement for feathering the sails or arms of wind wheels, and for equalizing their velocity under the action of a variable wind. The whole construction appears to be as simple and effective as any of those heretofore employed for the purpose, and to possess great advantages over the majority of them. The whole is kept constantly before the wind, without the employment of a vane or any other auxiliary device, and the surface of sail exposed is always inversely proportionate to the force of the wind. By a simple device the sails are held inoperative, when the wheels are not required to be in motion, or when a sudden gust of wind would endanger them. *Silver Medal.*

15. Saco Water Power Co., *Biddeford, Maine.* Shaping Engine. Well adapted for planing all kinds of locomotive engine work, and would be an excellent machine for a railroad machine shop. It is thorough, substantial, and well made in every respect, and for polish and high finish, will rank among tools of the first order. *Silver Medal.*

35. T. B. Mackay, *Agent*, *Boston.* Two Force Pumps, (Carey's Patent.) These pumps have been used for several years. Their construction is such that they throw a large quantity of water in proportion to the number of revolutions made by the crank.

36. Mower & Woodworth, *Boston.* Woodworth's Rope Making Machine. This machine is considered to be an improvement over others of its class, which have been liable to the objection that while they operated with sufficient rapidity upon small cords and ropes, they could not be employed economically upon larger rope, owing to the difficulty experienced in revolving the requisite number of large spools employed at a high rate of speed. This is measurably obviated in this machine, by the use of two fliers, one within the other, revolving in opposite directions. When the rate of speed of the two fliers is equal, a three fold twist is put into the strands. In the present machine we are informed the rate of speed of the inner flier is less than that of the outer one, and less than a three fold twist is the result.

So far as your Committee can judge from a single machine witnessed for a short space of time in operation, this is a valuable machine, and they recommend it to the notice of the public, and award a *Silver Medal.*

134. The same firm exhibited a Small Cord Machine. This is similar in its construction and arrangement, to the Rope Machine. It is a very compact and effective machine.

37. Hittinger, Cook & Co., *Charlestown.* Portable Steam Engine. A neat, well-constructed, and compact Portable Engine, for pile driving, hoisting, and other purposes. It was in use during the Exhibition, driving portions of the machinery, and operated exceedingly well. *Silver Medal.*

44. C. Potter, Jr., *New York.* Oscillating Printing Press. The distinguishing characteristic of this press lies in mounting the form bed upon the top of an oscillating column, by which it is alternately subjected to the action of the inking rollers, and of the platen, which is made in the form of a segment of a cylinder, which hangs over the form bed from a shaft above, and without the centre of its sweep, and is made to swing in company with the form bed by rack and segment cog geering. The machine embraces a plan for feeding the sheets upon the type form, by its own action, and for depositing the sheets when printed. It also offers a facility of correcting the *form* without removing it from its bed.

The Committee after a careful inspection of its movements under their own directions, are struck by the evidence of ingenuity and the appearance of practical fitness which it presents. They recommend a *Silver Medal.*

49. John White, *East Boston.* Model Car Replacer. An ingenious contrivance for cases of accident to which it may be suited.

58. Charles H. Hervey, *South Boston.* Model Rotary Pump.

94. Marland & Co., *Boston.* Two Fire Proof Safes. In these safes the door, as well as the jambs, lintel and threshold, against which it shuts, is composed of soap stone or other non-conducting substance, so that at no point shall there be a metallic communication from the outside to the inside of the safe. It is believed that this is the first time this desirable end has been attained, and that it is a great improvement in the construction of safes. There are also air spaces between both the interior and exterior metallic plates and the soap stone, by which the conducting power of the door is further diminished.

While your Committee wish to be cautious in recommending any thing upon which so much depends as on a fire proof safe, until they have had an opportunity of personally testing its value, they do not hesitate to express their opinion of this invention as very promising. It is obvious that the use of these precautions against fire, do not interfere with the burglar proof qualities of this safe. *Silver Medal.*

68. Danford White, *Boston.* Portable Circular Saw. This machine was in the Exhibition of 1853, and was awarded well-merited praise and a Silver Medal; since then some improvement has been made upon it, for which is awarded a *Diploma.*

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102. SAMUEL NICOLSON, *Boston.* Specimens of Nicolson's Pavement, and of Nicolson's Horse Railroad Rails. The Nicolson Pavement is familiar to all who take an intelligent interest in the various attempts of the last dozen years to secure the best pavement for city streets. It was favorably noticed at the Exhibition of 1853, and the sample then referred to as under trial, has exhibited a good result. The recent "improvements" suggested by Mr. Nicolson, seem to be judicious and practical, and the Committee cannot but feel a strong confidence as to the final result. For quiet, smoothness of surface, and ease to horses and carriages, this use of wood has received marked expressions of confidence, and it is a matter of regret that in the earlier trials of it, ignorance or neglect of the proper precautions against decay, and other oversights, tended to disappoint the public hopes, caused a revulsion of opinion against wooden pavements. Mr. Nicolson, therefore, deserves well of the community for his persevering efforts to obviate existing objections, and we think his present models merit at least a *Silver Medal.*

The models of Street Rails are ingenious, and some of them worthy a fair trial; but without practical test, the Committee forbear to express an opinion.

108. E. D. & G. DRAPER, *Milford, Mass.* Case of Temples and Oilers. These articles are of approved construction and excellent workmanship, and are deserving of a *Bronze Medal.*

127. JOHN E. WILDER, *Boston.* Three Fire Proof Safes. Mr. Wilder claims for these safes a superiority in the door joints, which are formed with a double rebate to cut off the direct radiation of heat through them, and in the use of a single inner door of wood, constructed and hung with a view to being swollen by the action of water or steam, which he states are very injurious at fires, by their insinuation to the interior of the safe, but are prevented from doing such mischief by the swelling of the door alluded to.

The specimens exhibited are creditable for workmanship, but the Committee cannot venture an opinion on the effect of the peculiarities presented.

Mr. Wilder's Safes have received a Silver Medal at a former Exhibition, and sustain their previous reputation.

119. J. C. MARBLE & Co. Holmes's Patent Hoop-Sawing Machine. This machine saws the hoops from the surface of the poles, and is so arranged that in the hands of a skillful workman, the interior surface of the hoop is preserved unbroken at the points where the knots occur. Without pretending to pass a judgment upon the comparative merits of split and sawed hoops, the Committee would recommend this machine for trial to those requiring the latter. *Bronze Medal.*

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138. Chickering & Sons. Specimen of Gig Sawing. This specimen of sawing was in the form of a rosewood swing frame, with side supporters of a very eleborate and tastefully designed pattern. The sawing is very perfect, and owing to the fineness of some of the scrolls, two of which do not exceed a fortieth and several a sixteenth of an inch in thickness, required great delicacy in its execution, and exceeds in quality any work of the kind ever seen by the Committee. *Bronze Medal.*

141. Bartlett & Potter, *Taunton, Mass.* Foot Lathe. This Lathe operates with a ratchet, wheel and belt, instead of a crank.

143. A. H. Brainard, *Boston.* Three Paint Mills. They are of different sizes, and substantially made, and appear to be well adapted to the purpose.

151. James T. Munroe, *Fitchburg, Mass.* Tallow Lubricator.

154. American Hoop Machine Co., *Fitchburg, Mass.* A Machine for Splitting Hoop Poles and a Machine for Shaving Hoops. These machines work in concert, the first splitting the poles, the latter shaving the hoops; they perform their work with the greatest nicety and rapidity, and with an economical expenditure of power. The Committee recommend these machines to the attention of the public. *Gold Medal.*

156. Richard Kitson, *Lowell, Mass.* Machine for Opening Cotton, Wool and other Fibrous Materials. This machine seems well adapted to the purpose intended. The Committee had no opportunity to witness its operation, and can judge of its performance only from its construction.

157. Isaac Van Hager, *New York.* Oil Cans for Oiling Locomotives and other Machinery. Exceedingly well made. *Diploma.*

163. Sylvester Stevens, *Boston.* Model of Double Acting Rotary Steam Engine.

172. Helme & Dorance, *Providence, R. I.* B. S. Codman & Co., *Boston, Agents.* Two Rolling Mills. These are for plating or rolling silver and other metals. One of them is of the usual kind, and the other is geered to increase the power, and the arrangement appears well adapted to the object. Certificates from parties who have used them, attest their good qualities. *Bronze Medal.*

173. T. D. Somes & Co., *Holyoke, Mass.* Two Cases of Loom Harnesses. These are excellent samples, and worthy of a *Diploma.*

175. Geo. Neilson, *Boston.* Railroad Car Ventilator and Ventilating Window. This is an apparatus by which air is drawn in through the roof of the car, passing over wet surfaces of sponge, for the arrest of dust and cinders, and is expelled through the windows, which are contracted and made convex for that purpose. It has been tried on several roads, and commended for its

efficiency, but the Committee fear that it needs too much official attention to secure a general and prominent adoption. For its ingenuity, however, they recommend a *Diploma.*

182. Gray & Wood, *South Boston.* Planing Machine. Circular Saw Set. The Planing Machine is a substantial, well-made machine, for planing either soft or hard wood, straight and out of wind; works with cylindrical revolving cutters, like those of the Woodworth Machines, with or without pressure rolls. The cutter head forms a concave cap or double iron, which is indispensable for plaining cross-grained wood. The manner of dogging the stuff to the platen is simple and good. For turning out first quality of work it is an excellent machine. *Silver Medal.*

183. D. E. & P. O. Eaton, *Boston.* Mechanical Watchman. This alarm is operated by magnetic influence, and its arrangement is ingenious.

184. New England Car Spring Co., *Boston.* Specimen of Car Springs. Excellent Specimens of Vulcanized Rubber Springs. We believe the springs made by the exhibiters have been highly approved. *Diploma.*

185. Charles H. Lewis, *Malden, Mass.* Car Platform. Intended to promote the safety of passengers.

187. Willis Mansfield, *New Haven, Conn.* Switch and Switch House. A contrivance by which the switch man is confined within his house till he has removed the switch upon the main track. Good in cases where but one switch is to be tended by one man. The Committee recommended a *Diploma.*

228. Jeremiah Myers, *Boston.* Water Meter, and two Water Machines. This machine is novel in its arrangement. The measuring chambers are three cylinders oscillating in vertical planes having pistons connected with a three crank shaft, which operates the register. The bases of these cylinders are saddled upon a horizontal cylinder, divided by a partition into inlet and outlet conduits. The oscillations of the measuring cylinders bring openings in their bases in correspondence with similar openings in the inlet and outlet conduits.

The arrangements of this meter insure an accurate admeasurement of the water which passes through it.

A meter involving less cost and less liability for friction, with equal accuracy is desirable, and would be extensively used. *Bronze Medal.*

237. Wendell Bollman, *Baltimore, Md.* Model Iron Railroad Bridge. The bridge of which this is a well-constructed model, is little known in this vicinity. Specimens of it may be seen over the enlarged Erie Canal, at Buffalo and elsewhere, and also on the Baltimore and Ohio Railroad, and Washington Branch. It differs essentially from other bridges in supporting each set of

posts or pannels, independently of all the others, by suspension rods directly from the extremities of the principal chord or straining beam, and is so constructed that should any one or any one set of the rods give way, the bridge would not be endangered, while other bridges would, in a like case, almost inevitably fall.

This feature is regarded as of great value, especially in the use of iron rods, which are so liable to flaws and so subject to be weakened by extreme frost in winter. The cost of this bridge is said to be no greater than that of other plans, and the maker has so fully digested and determined the proper dimensions of every part of it, as to present a very perfect whole.

Silver Medal.

241. Denio & Roberts, *Boston.* One Fire and Burglar Proof Safe. One Burglar Proof Safe. These safes are highly creditable to the makers, for their excellent workmanship, and, in the opinion of the Committee, fully sustain the burglar proof character claimed for them. Of the fire proof character of the first named, the Committee also entertain a good opinion, though they have the defect common to safes in general, of the continuity of metal from the outer plates to the interior of the cell.

The use of dry pulverized potters' clay, for the lining of the walls, seems to deserve special mention. *Silver Medal.*

254. F. S. Coburn, *Ipswich, Mass.* Water Gate Model.

255. N. M. Dame, *Boston.* Universal Pulley.

242. H. B. Smith, *Lowell, Mass.* Blind Machine. Self-operating Power Mortising Machine. Door Mortising Machine. The mortising machines, entered as above, appear to be constructed upon a good principle, and capable of performing well, and are suitable for shops doing a large business.

Bronze Medal.

The Blind Machine is a valuable invention for mortising the stiles of blinds to receive the slats. The importance of this machine would warrant its being more highly finished. It cuts a good mortise with great rapidity, and enables a manufacturer to furnish a better article at less cost than those made by any other method. For the principle the Committee recommend a

Gold Medal.

243. P. H. Walker, *Boston.* Butcher's Market Scales. One Patent Balance.

282. Edwards, Fernald & Kershaw, *Boston.* One Bank Safe. One Side Board Safe. One Bank Lock. The articles here named are all of an excellent quality, calling for admiration, and the Committee would specially commend the design of the Side Board Safe, as conceived in excellent taste. Their attention was particularly called to a lock used upon one of the safes,

which was invented and patented by Mueller. It is of that class in which the *bits* of the key are changeable, and the bolt can only be withdrawn by the arrangement of *bits* employed to shoot it, while there is but a single set of tumblers employed to effect this end. Your Committee consider the lock to possess peculiar merits, resulting mainly from the embodiment of this feature in a lock of such simplicity and compactness. *Silver Medal.*

250. Bacon & Hubbard, *Boston.* Lathe and Tools. This is a hand lathe, calculated for brass work ; attached is an apparatus for screw cutting, and is well calculated for brass and other light work. The other tools are well made in all respects. *Diploma.*

259. Anthony Hardy, *Boston.* Punching Machine. This is a power punch calculated for boiler makers and other iron workers. It is massive in its construction and powerful in its operation. Its improvement over the ordinary punch is in its adaptation to all kinds of flange as well as plate work. It is built in a thorough manner and weighs about five tons. It can be worked by hand or steam power. *Silver Medal.*

264. Wm. Adams & Co., *Boston.* One Case of Bank Locks. One Safe. The locks here referred to are those of Mr. Betteley, which, with a safe *door* contributed by Messrs. Adams & Co., received a Gold Medal at the last Exhibition in 1853. They unite simplicity and solidity of construction, with an extensive combination and security against powder and picking, in a high degree, and they are handsomely executed.

The safe now exhibited is highly creditable for workmanship and finish — a polished surface having been preferred to paint and gold leaf.

265. Peter H. Niles, *Boston.* Machine for Turning Wood to a Straight, Tapering and Irregular Pattern. The wood to be shaped is laid in a bed and fed to the machine by an endless chain with dogs; it is passed through a hollow arbor, with cutter head ; the cutters, being connected with a cam governing the pattern, expand and contract. The machine exhibited is of a size for turning out hoe, rake, and other like handles. The exhibiter states it to be his intention to build a machine on this principle, for shaping and finishing ships' spars. This machine is susceptible of further improvement, and has great capabilities. For the invention *Silver Medal.*

266. Mingay & Bartlett, *Boston.* Patent Improved Derrick. This machine has a sort of "*yard*" suspended upon the upper end of its "*boom*" operating as a lever for the management of weights not heavy enough to require the multiplied power of the main "*fall*," for which purpose the rope passes directly from its inner or power end to the wheel and axle. The Committee think it may be a useful machine for greatly varying loads.

272. Benjamin F. Bee, *N. Sandwich, Mass.* Boiler Feeder and Safety Enunciator, Model Boiler Feeder, and Safety Annunciator. One Boiler Feeder Model. The Committee repeatedly noticed the operations of this machine during the Exhibition. It regulated the supply of water to one of the boilers used for steam-power, and it appeared to do so satisfactorily. Its peculiar novelty consists in the fact, that safety is announced at intervals of every half minute, by the ringing of a bell, and danger by its cessation.

The Committee consider it an ingenious arrangement, well calculated to assist, but not to supersede a competent, careful engineer.

273. American Rock Drill Company, *Boston.* Machine for Rock Excavation and Artesian Wells. A well-known machine for drilling rocks, which has been some time before the public, and whose merits are well known.

275. M. Andrews, *Bridgewater, Mass.* Taper Sectional Saw, with Teeth inserted. One Patent Bit-Stock. A Circular Saw made in segments and held together by dovetails, the teeth also being separate and inserted in a similar manner. Various advantages are claimed for this composite saw, but your Committee having had no opportunity of witnessing its operation, or testing its merits, are unable to attest its utility.

The bit-stock is a good article, not liable to get out of order, and the Committee recommend it to the notice of the public, and award a *Diploma.*

276. Massachusetts Moulding Wood and Turning Company. Geer's Machine for Cutting Irregular Forms, improved by J. P. Grosvenor. It is capable of conforming work accurately to patterns of any form, such as picture frames, ornamental work for furniture, irregular and moulded work used by housewrights and others. It would seem quite indispensable in shops engaged in this class of work. *Silver Medal.*

280. American Water Wheel Company, *Wareham, Mass.* Model of Water Wheel. Turbine Water Wheel. This may be considered as a very simple wheel for one of its class. The water is admitted to the external circumference of the wheel, and discharged towards the centre, and at the underside of the wheel. The buckets are made of sheet steel and are cast into the plate and rim of the wheel in an apparently strong and durable manner. The manufacturers suspend the larger sizes of the wheels they build upon the upper end of a stationary shaft, the wheel being secured to a hollow shaft, which revolves around the fixed shaft, and carries on its upper end an adjustable pivot screw with friction washers. This plan is simple and judicious for the shorter shafts, easy of access and repair, and not liable to derangement.

Silver Medal.

287. Merriam & Crosby. Design of Marine Engine. A series of drawings in detail, embraced in the drawings of the design on exhibition, were also submitted to your Committee, with particular reference to their mechanical exe-

cution, and also for their arrangement, form and general adaptation to the different parts of the design as a whole. These drawings of details embraced all the principal and most of the smaller parts of the engine and boilers.

The engine has two cylinders placed opposite each other across the ship, at an angle of 120° with each other. They are of the kind termed oscillating and condensing, and are applied to a propeller. A pair of engines from these designs have been constructed and put together by the Atlantic Works of East Boston, which were also examined by the Committee.

The ship in which these engines are placed is made of iron, and is now nearly completed. The naval architect is Mr. Pook, of Charlestown, the construction and general superintendence is under the charge of Messrs. Merriam & Crosby, and the builders are Messrs. Holden & Gallagher, of East Boston.

The drawings exhibited are well made, shaded and colored, and reflect great credit on Messrs. Merriam & Crosby, as mechanical draftsmen.

The Committee regard the design of the engine as peculiarly well adapted for the necessarily small space which is allotted them in the ship. She is designed as a ship of war; and machinery, boilers and engines must be some two feet below the water line.

As a whole, these designs, drawings, engine and ship, are regarded by your Committee as the most encouraging evidence of the ability of the engineers and mechanics of Boston, successfully to compete with those of other places, in the construction of Marine Engines and Iron Ships; and in conclusion, would respectfully commend them to the attention of merchants and the public generally. *Silver Medal.*

290. Silsby, Mynderse & Co., *Seneca Falls, N. Y.* Rotary Pumps, (Hollis's Patent.) Power Pump. Iron Force and Suction Pumps. Garden Engine. Their construction is simple. Water is made to serve the purpose of packing. The elliptical form of the wheels or pistons enables them to throw a large stream. *Bronze Medal.*

The same firm exhibit a Power Mortising Machine, suitable for mortising doors and sashes. The power takes effect upon the chisel, giving to it a vibratory motion, as a treadle is pressed by the foot, which brings a strap in contact with the friction pulley. One of the best operating machines the Committee have seen for the purposes abovementioned, and other similar work. *Bronze Medal.*

294. Butterworth & Co., *N. J.*, by J. B. Prince. Bank Lock. Draw Lock. These are locks with a great multitude of combinations, and apparently secure against picking or gunpowder. The workmanship is of an ordinary character, though the plan is the result of much ingenuity. The Committee recommend a *Bronze Medal.*

298. Jacob Busser, *Philadelphia.* Railroad Signal. An apparatus for ringing bells on the approach of a train or engine to a road crossing, a draw bridge, or the like. One bell being rung at a distance from the point of danger to indicate to the engine driver that a simultaneous ringing is in operation at such point, so that in the absence of such ringing he may know that he should stop. The plan is worthy of the attention of the Legislature, though in its main features it has been anticipated as an invention. The machinery now proposed is not so simple as it should be.

302. Geo. M. Bird & Co. Portable Steam Engine. A substantial and well-made article. *Bronze Medal.*

307. Wheeler & Wilson, *Boston*, by J. R. Root, *Agent, Boston.* Two Sewing Machines. This may be termed a Rotary Shuttle Machine. It performs most perfect work with great rapidity. We consider it best, if not exclusively, adapted to the sewing of cloth, and from its compactness and simplicity well suited for domestic uses. It has been extensively used, and has received successive improvements suggested by long experience, and it appears very perfect in all its parts. It has never been on exhibition here before, and your Committee deem it deserving of a *Silver Medal.*

311. T. J. Flanders, *Manchester, N. H.* Model Circular Saw Mill. The novelty of this article consists of a circular saw without an arbor. While it gives evidence of ingenuity in the invention, it is evident that it cannot be made available for any purpose for which there are not better machines already in use.

314. Benaiah Fitts, *Worcester.* Automatic Boiler Feeder and Water Gauge.

320. James M. Cook, *Taunton.* Two Railroad Car Ventilators. An excellent, simple contrivance, deemed worthy a *Bronze Medal.*

322. C. R. McLean, *Boston.* Two Designs for Flour Mills. The arrangement good, and clearly represented in the drawing. *Silver Medal.*

323. Robert Nixon, *Boston.* Two Drawings — Flour Mills. Well executed.

326. E. Holmes, *Lynn, Mass.* Spoke Shaves. This is a good instrument, of durable and economical construction, affording a superior mode of sharpening, and facility of adjustment, and is entitled to a *Diploma.*

329. David Tupper, *Boston.* Shingle Machine for Planing and Sawing. This machine was not put in operation at the Exhibition until after the judges had made up their report.

333. C. W. Emery, *Boston.* Match Splitting Machine.

340. R. Hollings, *Boston*. Railroad Signal.

342. Ammi White, *Boston*. Model of Suspension Bridge. Self-sustaining Bridge, (in use.) The first of these subjects was reported upon favorably, at the Exhibition of 1850, and this Committee are not aware of any material change since made in it.

The bridge, now extended from Faneuil Hall to Quincy Hall, is quite a different structure, recently devised by Mr. White, and comes now, for the first time, under our notice. In this he has exerted his usual ingenuity, and with so much success, that more than seventy-five thousand passengers may, in the language of the proverb, "Bless the bridge which has safely borne them over." This has been done, too, with very slender materials, much, we dare say, to the surprise of persons less acquainted with the art of bridge building than is Mr. White. In friendliness to Mr. White, we cannot forbear, however, to say, that this bridge is not entirely free from defects.

363. Rice & Dryden, *Worcester*. Patent Boring Machine.

343. Ebenezer Kellogg, *Roxbury*. Belt Punch. A very convenient tool, embracing in its arrangement a knife, two awls, and a spring punch. *A Diploma.*

367. Geo. T. McLauthlin & Co. Rider Water Wheel. Simplified Turbine Water Wheel. Saw Mill Wheel Bucket. The simplicity of the Rider Wheel will recommend its use very extensively. Your Committee had no means of testing its efficiency, but from the numerous certificates which the parties have from those who are using them, there appears much satisfaction on the part of purchasers on this point. The wheel is cast in one piece, and does not seem to be liable to accidents or derangement. The great amount of water power in this country available for mechanical and manufacturing purposes, creates a demand for water wheels which shall combine the following qualities, viz: — as great efficiency as can be obtained at a moderate cost, simplicity of construction, facility in setting up, and ready access for removing obstructions and effecting repairs. *A Silver Medal.*

368. C. B. Rogers, *Conn*. Small Moulding Machine. This appeared similar to machines in common use for sticking mouldings. It was not operated in the hall.

371. James Ames, *Chicopee*, *Mass.*, for Ames Manufacturing Co., *Chicopee*. Ball's Safety Boiler Feed Pump. This invention has been examined with great care and interest by your Committee, and it is believed to be the most valuable, trustworthy, and safe apparatus for feeding steam boilers, that has ever been introduced. Your Committee have sought in vain for a single casuality that could occur, with the apparatus under consid-

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eration, of which it could not of itself give immediate notice. The invention is applicable wherever an auxiliary engine is employed to feed the boilers, and its distinguishing characteristic consists in *taking the steam from the boiler at the exact point at which the water is required to stand*, the mixture of steam and water thus drawn off being throttled on its way to the auxiliary engine, by passing through a cock in the pipe, and thus the operation of the engine is clogged in proportion as a greater or less amount of water is carried along with the steam. Previous to its arrival at the pumping engine, the steam is entirely separated from the water by a novel and ingenious device, called a separator, which passes back the hot water to the pumps, and forwards the steam to the cylinders of the auxiliary engine. The Committee recommend this ingenious contrivance wherever auxiliary engines are used for feeding boilers. *Gold Medal.*

372. F. A. Hoyt & Co., *Boston.* Three Water Gauges. One Steam Water Gauge. This steam water gauge depends upon a float for its action, the whole of which is outside the boilers and connected with the boiler in the usual way. Well made. A good auxiliary to the gauge cock. For the Water Gauge a *Bronze Medal.*

379. Dodge, Gilbert & Co., *Boston.* Portable Forge. A well-known and useful article.

380. Davis & Furbur, *N. Andover.* Wool Picker Machine. Wool Carding Machine. Both these machines are specimens of excellent workmanship, and are both superior machines, and entitled to a *Bronze Medal.*

383. Putnam Manufacturing Company, *Fitchburg.* Steam Engine. This is the stationary engine which furnished power for the Exhibition, and was manufactured by the exhibiters. It attracted great notice from the visiters, and one of the Committee spent an entire day in examining and testing its operations by the Steam Indicator. The engine has run under disadvantages — its connection with the boilers, outside the building, was by a long exposed steam pipe, inclined towards the engine, in which steam condensed, and water was constantly working through the engine. The results of these trials were quite satisfactory, the engine performed very well, and with a better adjustment of the valves and a proper location, will perform still better. The valves of this engine are of the " balance puppett " kind, moved by cam shafts running half the speed of the crank shaft, to which it is geered, and the lift of the steam valves is regulated by the governor, connected by single vibratory levers of peculiar construction lying upon the cams. This arrangement is new, so far as the reduction of the speed of the cam shaft is concerned, by which more scope is given to the regulating of the steam admitted in the cylinder. The workmanship of every part of the engine is of the first quality, and the finish unsurpassed. *Gold Medal.*

The same Company contribute three Engine Lathes and One Planer. These Engine Lathes are very fine tools, calculated for cutting screws of almost any description. They are of an improved construction, and very finely finished. The Planer is a first-rate machine, and entitled to the highest commendation for its superior workmanship and finish. *Silver Medal.*

390. John N. Sawtell, *Chicopee.* Throstle Spinning Flier. The merit claimed for this Flier is in the soldering of the wire without annealing it, and thereby retaining its inflexibility. This quality, (however the manufacturer secures it,) gives greater value to the article. *Diploma.*

393. J. A. Fay & Co., *Keene, N. H.* Power Mortising Machine. Medium Size Tenoning Machine. Large Foot Mortising Machine. Portable Mortising Machine. These articles fully sustain the well-deserved reputation of the manufacturers Some of these machines have been on exhibition before, and received favorable notice.

The Power Mortising Machine is entitled to a *Bronze Medal.*
For the Portable Iron Pedestal and Column, a *Diploma.*

396. George T. Lane, *Boston.* Model Self-acting Car Brake.

400. Otis Vinal, *Boston.* Mortising Machine.

406. James Harrity, *Boston.* Model Steam Engine. A good working model of a non-condensing steam engine.

408. Henry Morse, *Somerville.* Bank Lock. This is a good compact Lock, and received a Diploma at the Exhibition of 1853.

414 Joshua Gray, *Boston.* Car Switch and Pencil Head.

415. Joseph Leeds, *Philadelphia.* Patent Chimney. This consists of an iron cylinder placed within the usual brick chimney of a furnace, so as to leave a space between the cylinder and the brick work, to which space the air is admitted from below. The chimney rises above the cylinder several feet, and the object is to increase the draft by the ascent of the air, which is heated in the space between the cylinder and chimney. The inventor attached his contrivance to the chimney of the boiler furnace by which the steam was generated for the motive power of the Exhibition, where it operated satisfactorily; but the Committee were unable to compare it with, or test its advantages over, a common chimney in the place where this was located.

425. A. Graham, *Roxbury.* Newly invented Wrench. Reversible and adjustable, a convenient arrangement, particularly in contracted spaces; the nut may be turned entirely up without removing the wrench.

434. D. H. Smith, *Newburyport.* Comb-cutting Machine. A well-arranged and well-executed machine for the purpose designed. The Committee discerned no features of novelty.

448. Bisbee & Endicott, *Chelsea.* Patent Steam Gauge Cock. A simple and improved Screw Gauge Cock for Steam Boilers. *Diploma.*

456. C. S. Harris, *Needham.* Case of Hand Drills. A very good article, and highly finished. This is a novel arrangement for securing a continuous revolution of the drill in one direction, from the use of a drill bow, without the intervention of a ratchet. There are two driving bands, and they act alternately, and the one in action is always drawn so tight as to carry round the drill without slipping. In the opinion of the Committee it is a good device, and worthy of a *Bronze Medal.*

466. E. Stebbins, *Chicopee.* Bibb Cock.

467. L. Stephenson & Co. Scales and Balances. These have for many years occupied a favored place in the public confidence, and the specimens exhibited justify the highest degree of that confidence, by their excellence of proportion and workmanship, and their exceeding delicacy of result. The Committee are aware that this is not their first appearance in the Exhibitions of this Association, but such is their sense of the continued efforts of the Messrs. Stephenson & Co., for their improvement of what is so essential to the public wants, and of their admirable success in meeting those wants by these "just balances," that we cannot forbear to recommend the award of a *Silver Medal.*

469. M. G. Farmer, *Boston.* House Alarm. (A. R. Pope's Patent.) This was favorably noticed at the last Exhibition.

475. Joel Baker, *S. Boston.* Car Wheel improved. Disk and arms combined.

480. J. K. Rogers & Co., *Boston.* Type-casting Machine. The operation of this machine was very satisfactory to the Committee. The melted metal is forced into the mould by a piston, and a very perfect type is formed. It is understood that this machine is not presented as new, it having been several years in operation in this city. It is deemed worthy of high commendation and a *Silver Medal.*

493. Geo. Woods, *Boston.* One Sawing and Turning Machine. One Portable Sawing Machine. This machine for sawing is simple and compact, well suited for small work. It would be very convenient in shops where various kinds of joiner's work is done. Is a desirable instrument for an amateur. *Bronze Medal.*

494. E. W. Strange, *Taunton.* Hoop Sawing Machine. This machine operates with reciprocating saws, they being so connected with the feed rolls as always to remain at a uniform distance from them.

500. Walter Bryant, *Boston.* Specimen of Horse Railroad Track. This is a movement in the right direction, in this iron and railroad age. Without recommending the specimens exhibited as perfect in their proportions, which, we believe, the exhibiter does not claim, we think the subject worthy the consideration of persons interested in building horse railroad tracks, in large cities or towns. *Diploma.*

514. Samuel L. Hay, *Boston.* Self-regulating Blast Pipe, accompanied by a Drawing. A new and superior arrangement for a self-regulating blast pipe for locomotive engines. Its practical utility is not fully determined. The Committee recommend it to the favorable notice of railroad companies.

527. G. S. Griggs, *Roxbury.* Model of Locomotive Driving Wheel. One Frost and Heater Cock for Locomotive. One Double Railroad Gate for Crossings. One Running Geer for Locomotive. The exhibiter has displayed his well-known skill in all the above articles. The Driving Wheel shows a new method of putting on tires, by inserting between the tire and the main part of the wheel, blocks of wood, which will deaden the great percussion to which the wheel is subjected in extreme cold weather, by the rigid and unyielding state of the track. We would call the attention of those interested in the repairs or running of locomotives, to this wheel, and likewise to the simplicity and durability of the Frost Cock exhibited. The Railroad Gate is also worthy the attention of railroad managers and all persons interested in security from accidents at railroad crossings. This description of gate has been in use on the Providence Railroad for some years, and has given satisfaction. *Silver Medal.*

534. Elisha Stone, *Boston.* Patent Attachment for Opening and Closing Scuttles. The Committee could not judge of this without explanation, which was not furnished.

548. Otis Whitney, *Boston.* One Sewing Machine. This is a Shuttle machine, and its chief merit consists in its simplicity. It is so constructed as not to be liable to derangement, and it would seem that a child might safely work it. The machine on exhibition is best adapted to stout work. *Silver Medal.*

555. Isaac W. Marchant, *Boston.* Lubricating Oil. The Committee had no opportunity to test this nor 620.

556. J. B. Johnson, *Boston.* Stationary Steam Engine, with improved Cut-off. A simple arrangement of the variable link motion. *Diploma.*

557. F. S. Wyman, *Boston.* Improved Steam Water Cock. A very good article, of superior construction. *Diploma.*

566. Emery, Houghton & Co. Small Family Sewing Machine. Large Single Thread Sewing Machine. One Small Steam Engine with Oscillating

Cylinder. These Sewing Machines, with the small Steam Engine used in driving them, are all of beautiful workmanship, and deserve high praise. The Sewing Machines work a single thread, and do their work with great rapidity. They are adapted to sewing, hemming, and most kinds of domestic work, and they perform their work well. *Silver Medal.*

574. H. A. Davis, *Boston.* Smyth's Patent Scale.

583. Milton Roberts, *Belfast, Maine.* Automatic Self-acting Machine. This *title* was intended to describe an Automatic Lathe Attachment, for turning figured wood work. The machine performs its duty more accurately than the title does its own. The substantial features of novelty consist in the employment of two inclined planes attached to the vibrating cutter-head, and the tooth rack into which they work, thereby producing a feed motion for the cutters. The arrangements are simple and effective; the work is rapidly and perfectly executed. *Silver Medal.*

585. J. C. Wilder, *Boston.* Improved Lathe Dog. A Dog for holding articles in the lathe, adjustable to different diameters, and so made as to save the surfaces grasped from being marred. *Bronze Medal.*

590. D. L. Davis, *Roxbury.* Railroad Chair, (*alias* Chair for Rails.) This Chair, for holding rails, is intended to be used by interposing a piece of vulcanized rubber between the rail and the chair, so that the jar of the passing load may be diminished, to the great saving of wear on the rolling stock of a railroad. We understand it has been tried with success.

Bronze Medal.

592. John A. Kimball, *Charlestown.* Specimen of Forging. Excellent workmanship. *Diploma.*

595. Gray Pump Manufacturing Company, *Boston.* Gray's Rotary Pump. One of the best of this class; runs with little friction or noise. Where a rotary pump is required this may be recommended.

599. L. Lamson, *Vergennes, Vt.* One small Scale.

604. Jos. W. Kilham, *E. Wilton, N. H.* Model Planing Machine. This model represents a machine for four-side planing, making square work for car frames, and other similar purposes.

612. H. Sargent, *Newburyport.* Burglar's Alarm. A mechanical apparatus for giving a bell-alarm on the opening of a door.

620. B. Tucker, *Boston.* Can of Lubricating Oil. The Committee had no opportunity properly to test the value of this oil.

622. Crane & Tompkins, *Newark, N. J.* Irregular-form Turning Lathe. An ingeniously constructed machine for turning to a pattern, spiral and various sided furniture legs, balusters, and other similar work.

Bronze Medal.

632. Wm. Thornton, *Worcester, Mass.* Two Smith's Shears. A good article, and in common use.

633. James A. Woodbury, *Winchester, Mass.* Wood Planing Machine. The peculiarity of this machine is the "*Movable Plate,*" which serves to hold the fibre while operated upon by the circular cutters, thereby preventing the splitting and tearing of the wood. By this contrivance cross-grained and knotty wood is well planed to an even thickness. It can also be used for clapboards, or other work requiring a bevel. The Committee consider the invention of Mr. Woodbury as a valuable improvement in perfecting the "cut" in planing machines, and award a *Gold Medal.*

642. Ryan & Griffin, *Wilmington, Del.* Self-connecting and Detaching Car Coupling. An ingenious form of coupling, apparently sure as a *self-coupler*, but demanding much trial to prove its entire reliability when in use on the road; the form is also quite difficult for forging.

The patentee contends with a most difficult problem, and has succeeded to a degree creditable to his ingenuity. *Diploma.*

646. Samuel L. Thaxter, *Agent, Boston.* Boxes Kindling Wood, and Machine for Sawing and Splitting Kindling Wood. This is a very useful contrivance, and the products useful to housekeepers.

647. E. Sanderson, *Boston.* One Model of Splitting Machine. One Suction and Force Pump. This pump is operated by a crank carrying a roller, which compresses an elastic tube of rubber, thereby forcing out the water before the roller; and the tube, expanding after the roller passes again, fills with water to be forced forward at the next pressure of the roller.

656. Fitchburg Foundry and Machine Company. Model Machine for Heading Bolts. This model, though small, operated with despatch. Samples of bolts were exhibited, made by a large machine, which were very good. The Committee consider it a labor-saving and useful machine.

Silver Medal.

662. L. E. Lincoln, *Lowell.* Steam Boiler Water Gauge.

664. Nichols, Leavitt & Co., *Boston.* Sewing Machines. These use a waxed thread, and have a very ingenious arrangement whereby they wax their own thread. These are the same class of machines that were exhibited at the last Fair, by Nichols and Bliss, but are very much improved. They have connected a very ingenious attachment for binding Shoes and Boots with leather binding. They have attached a spring or finger, which holds the thread in the shuttle, at a certain point, so as to enable them to draw a *tight* stitch, which so imbeds the thread that it is not so liable to wear off. These machines work very rapidly. *Silver Medal.*

693. Stover & Bicknell, *Boston.* Machine for Cutting Irregular Forms. Geering for Cutting Straight Mouldings. This machine is similar to 276, and the remarks under that number are applicable to this. It has guards upon the cutter heads, over the cutters, which lessens the liability of accidents to the operator. *Silver Medal.*

702. Phineas Hull, *Boston.* One Rolling Machine.

703. M. Felton & Co., *Milbury.* Improved Car Wheels. A combination of disk and spokes interlocked.

709. A. B. Howe, *New York.* Sewing Machine. This is the PIONEER in the sewing department. A very fine machine, works very rapidly, and with a very small needle, causing the thread to fill the hole, which makes the stitch tight. *Silver Medal.*

715. Moses Woodbury, *Boston.* Safety Faucet. The nature of this invention consists in so constructing a faucet that whenever there is any pressure in the pipe to which it is attached, beyond a certain number of pounds to the square inch, it will open and let water escape where it is drawn when required for use. Also in the manner of applying the eccentric between two projections on the cap to raise the piston valve, and cause it to stand open, or be self-closing at option; and in the manner of using a packed piston in a cylinder, to serve as a perfect guide for the piston valve, to and from its seat, as seen in sections on exhibition with the faucets. A subsequent improvement consists in making the valve a hollow cylinder, connected to whatever may operate it by a moveable joint, and containing the spring screwed down to its required pressure, or to use the same cylinder, with the same connection, without the spring, as the case may require. This hollow cylinder valve is guided by the cylindrical body of the faucet, and is made positive closing or not, and with any kind of handle. An improved and superior article. *Silver Medal.*

710. Hunt & Webster, *Boston.* Sewing Machine. This machine was on exhibition in 1853, and is a two-thread machine. It was well spoken of and received a silver medal.

It has since been improved in its arrangements, particularly in the feed motion. It is now one of the most simple, and we should judge durable machines before the public. It is now adapted to a great variety of work. For its improvements, beautiful execution, and perfect operation, the Committee award a *Silver Medal.*

717. Howard & Davis, *Boston.* Eyelet Sewing Machine. Hand Sewing Machine. This sewing machine was entered at last Exhibition, and received for its range of adaptability, and rapid and perfect work, a Gold Medal. Since that time it has been materially improved in its details, and

by an *ingenious appendage* has been made capable of working eyelet holes with astonishing celerity and perfection. *Silver Medal.*

For the *invention* of the eyelet attachment we also award a *Silver Medal.*

720. C. W. Hawkes, *Boston.* Drawing of a Steam Engine.

728. John L. Whipple, *Boston.* Improvement in Grinding Mill.

736. Nathan Sargent, *Charlestown.* One Extension Crank Hand Fly Wheel.

749. R. B. Fitts, *Boston.* New Machine for Reducing all Kinds of Wood to a Fibrous Pulp for making Paper. The increased and increasing consumption of paper, and the consequent demand for paper stock, render it a desideratum to secure the application of the more solid and cheap vegetable substances of a fibrous nature as a material in its manufacture. Our forests afford an inexhaustible resource, if we can make it available, and every attempt to substitute the more solid for the softer vegetable fibre, deserves the encouragement of the community. The plan and process exhibited in operation to your Committee, at No. 50 Albany street, is an ingenious device for the accomplishment of this object. The machine may be described as a large stone disk, revolving perpendicularly, (although it actually is an iron wheel with separate stones let into and secured to both of its faces.) The faces are dressed to a perfect plane, true with the plane of revolution. Upon this wheel are attached twenty frames, with centres to receive cylindrical blocks of wood, some twelve inches long, and of any diameter that may be desired. These frames are all fitted so as to swing upon pivots, for the purpose of bringing the cylinders of wood in contact with the stone faces of the wheel. The axes of these wooden cylinders, when thus in contact, if prolonged, would form a decagon. When thus in contact the wheel revolves rapidly and the cylinders of wood slowly. This combination of motion produces a friction, more or less severe, according to the pressure upon the cylinders, which is determined by springs to each cylinder frame, which are adjustable to the exigencies of the work. This friction is *almost* parallel to the axes of the cylinders of wood, varying only as the curve and chord of a small arc. The effect is to tear off the fibres of the cylinder without grinding the wood to dust. To make perfect paper, every *particle* of its material should form *part of a fibre*, and the goodness of paper depends upon the *strength*, combined with the *length*, of its fibres. Dust deteriorates and alloys the manufacture; short or weak fibres render it easy to tear. So far as this friction crosses the fibre of the cylinder blocks it tends to abrasion and to the forming of dust, and impairs the value of the pulp. This can be obviated, probably, by increasing the number of the blocks upon the same wheel, or increasing the size of the wheel for blocks of the present length. The machine operated

during the examination at the rate of making about five hundred pounds of pulp, from spruce wood, in twenty-four hours. This is about the amount of pulp which can be beat from rags in the same time, by a beating engine with twelve horse-power applied. The pulp from this machine was not fully prepared for use, and would require to be beat over in a common beater, or made more perfect by some substitute process. It is doubtful whether perfected pulp can be formed in the same process that strips it from the wood. Your Committee are inclined to consider the general design feasible, and to believe it may, after further experience, lead to the *partial* use of wood, as a material of paper. The principle of obtaining the pulp seems to be a correct one, and the combination for this purpose exhibits much ingenuity.

764. Greenleaf & Brown, *Boston*, for Fairbanks & Co., *New York.* Three Brass Beams. Two Iron Beams polished. One Silver Prescription Scale with Glass Standard. One Cornometer for Measuring Grain by Weights. Of the scales and balances of Fairbanks & Co., very much the same may be said as is said elsewhere of those of Stephenson & Co. The large balance exhibited by the former, is a little less sensitive than that of the latter, but the difference is not greater than might be expected in balances of the same maker, and we therefore award to the Messrs. Fairbanks & Co. a *Silver Medal.*

781. C. A. Browning, *Worcester.* Truesdell's Patent Brace and Weight Distributing Bridge.

794. Henry Bickford, *Boston.* Bank Vault Lock. This is a first class lock, apparently pick and powder proof; and the maker claims, as of special value, the use of a pall to hold the bolt when driven.

819. Edwin A. Forbush, *Lawrence, Mass.* One Power Sewing Machine. This sewing machine was presented at the last Exhibition, and received a Gold Medal, as an ingenious and original machine.

Since that time it has been greatly simplified in its parts and its action. Several valuable improvements have been introduced, and the machine now performs with great certainty and exactness, and the Committee consider its practical value as now established. It performs the precise cordwainer's double-thread stitch as firmly and accurately as the first rate workmen. For the value of the improvements introduced the Committee award a *Silver Medal.*

819. Lawrence Machine Shop, *Lawrence, Mass.* A Portable Steam Engine. This was an effective and compact engine, and was used to operate "Forbush's Power Sewing Machine," during the Exhibition. *Diploma.*

285. E. H. Ashcroft, *Boston.* Steam Water Gauge. A very valuable and reliable instrument, fully tested.

775.* **Boston Steam Gauge Company.** Allen's Improved Steam Gauge. In this Gauge a piston works in a cylinder; to the piston is attached an elliptic spring, to which is connected a rack and pinion, giving motion to the indicator or hand. A compact arrangement of a piston gauge.

800. **J. E. Eastman,** *Boston.* Steam Gauge. A good and useful instrument much used on our western waters. *Silver Medal.*

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* Some dissatisfaction with the Judges having been expressed by the contributors of No. 775, a Special Committee was appointed from the Executive Committee, to examine and report upon these articles, in addition to the report of the Judges. This Report, as it presents some interesting facts, is herewith appended, as the action of the Executive Committee:—

"It is important to have appended to all steam boilers some apparatus that will indicate the true pressure of steam, both as regards safety, and economy in the use of fuel. The only reliable indicator now in use is the syphon with a column of mercury. But, as it is not practicable to apply this to high pressure boilers generally, and particularly to locomotive boilers, we have to resort to some other method.

"There are now in this Exhibition three kinds of instruments, called Steam Gauges. designed to show the pressure of steam.

"One of them is of French invention, which is here called Ashcroft's Steam Gauge. This one has been longest known in this vicinity, and has been improved from time to time and is now probably more extensively used than any other of American make. Its main feature is a curved tube, having free communication with the steam. Hence the pressure in the tube causes it to extend, or straighten, which gives motion to a rack and gearing, with which the indicating hand is connected. Its liability to fail in giving a true indication of the pressure, is in the tube's losing its elasticity as a spring, or in the condensation of water in the tube. The first, however, would show an error on the safe side, as it would then indicate more pressure than there really was.

"Another one, exhibited by the Boston Steam Gauge Company, has not been in use a sufficient length of time to enable those who have occasion to use such instrnments to judge practically of its merits. The main feature of this is a common, elliptical, steel spring, placed horizontally across the disk, with the converse side down, against which a piston passing through a cylinder, designed to be steam tight, with a free motion, but without friction, acts, by the pressure of steam against the lower end, which has free communication with the steam. This causes the spring to rise and put in motion the rack and gearing, to which is connected the indicating hand, with a less amount of gearing, however, than is employed in the Ashcroft Gauge. The liability of failure in this, is the difficulty of so fitting the piston that it will remain steam tight without producing undue friction by corrosion or unequal expansion of the metal, which, without any practical knowledge, we apprehend may be troublesome.

"The Eastman Gauge, without going into a particular description, is similar in principle to the German Gauge, and has been in use a sufficient length of time to have its merits tested. It has been improved since its first introduction, and by many is preferred at this time. The liability of failure in this, is the uncertainty of the disk, which is of India Rubber, retaining its original properties under the various pressures and temperatures.

"The comparative merit of these important instruments is being tested daily, by their practical use under the various circumstances to which they are liable to be subjected; and all parties engaged in the manufacture, improvement, or introduction of Steam Gauges should receive every encouragement that so important a guard against explosions demands.

"H. HINKLEY,
"L. MILES STANDISH."

823. J. S. POTTER, *Boston.* Babcock's Polychromatic Printing Press. The polychromatic press is intended to print different colors on the same sheet, by successive impressions in the same machine. Several sheets are arranged upon the successive faces or beds of a revolving polygonal platen. In the machine exhibited, four beds are used, intended to employ three forms of types, giving their simultaneous impressions, each of a different color; each form contains all the matter intended to print any one color; thus directly, three distinct colors are printed, and by setting a portion of matter in successive forms, new colors are produced by combination. If red, blue, and yellow are the colors used, a double impression with blue and yellow produces green, or red and yellow will produce orange; by the employment of additional forms and colors a great variety of shades may be obtained. This press performs its work with great accuracy and rapidity; the devices for effecting the operations of inking, holding the sheets, giving the impressions, with the registering and locking, evince great ingenuity, and a high order of inventive talent. *Gold Medal.*

828. H. W. WILSON, *Boston.* A Circular Saw-Set.

840. C. H. HILL, *Billerica.* Planing Machine. A small, well-made machine. It was not in operation, and the Committee had no means of judging of its capabilities.

849. J. C. SEELYE, *Boston.* One Brace and Bits. The device for locking the bit appeared to be a good one.

852. SYLVANUS WALKER, *Worcester.* Yankee Joint and Self-operating Oiler.

875. ENOCH OSGOOD, *Bangor, Maine.* Model of Sawing Machine.

885. VERGENNES SCALE COMPANY, *Vermont.* Railroad Weighing Scale.

895. P. LEAR, *Medford.* Submerged Horizontal Wheel for Propelling, Pumping, and Ventilating Steamboats.

902. LEWIS CUTTING, *Lowell.* Stop Motion for Drawing Speeders, and Slubbing Frames. This is an improvement for stopping the machine to which it is attached, upon the breaking of a single roving. It is greatly superior to the former modes of accomplishing this object, and it is simple and certain in its operation, and deserves a *Bronze Medal.*

905. JOHN TAPLEY, *Prospect, Maine.* Boiler Force Pump. A Pump of undoubted excellence, and having high commendations from practical men, by whom it has been tested. The Committee recommend it to the public, and award a *Bronze Medal.*

908. A. B. Copeland, *Boston.* Model of Steam Engine. A good working model, of the ordinary form.

910. W. D. Davis, *Boston.* Four Vises. Well-made and substantial articles. *Diploma.*

911. American Steam Gauge Company, *Boston.* Six Steam Gauges. Very superior articles, well known and extensively used. *Silver Medal.*

913. Williams & Page, *Boston.* Railroad Supply Goods—Railroad Lanthorn. One Card Samples. Whistles, &c. These articles appear to be of the best quality and worthy the attention of purchasers. *Diploma.*

917. George C. Jenks, *Boston.* Pliant Box Hand Stamp. A good substitute for the stencil. It is composed of a material similar to that used for ink-rollers and can be furnished at a moderate cost. *Diploma.*

922. John T. Ogden, *Boston.* Three Smiths' Vices. Good, workmanlike articles. *Diploma.*

923. Elmer Townsend, *Boston.* Wax Thread Sewing Machine. This machine is for a single waxed thread, and is used for closing and stitching leather, and is a very effective machine, performing its work with great accuracy and despatch. The machine on exhibition is fitted for heavy work, but the principle is valuable for all kinds of leather work. *Silver Medal.*

930. T. K. Earle & Co., *Worcester.* Machine Card Clothing. An excellent article, and worthy the reputation of these well-known makers. *Diploma.*

935. Southworth & Hawes, *Boston.* Parlor Stereoscope. This instrument, which is for the purpose of presenting to the eye as *one*, two Daguerreotypes taken from two points of view, and thereby giving a bolder relief, is a beautiful and interesting combination of graphic and mechanic art. It was on exhibition in 1853, and received the award of a Gold Medal. In its mechanical details it has been materially simplified and improved, and deserving the notice of all lovers of the beautiful.

937. George G. Smith, for R. A. Wilder, *Schuylkill Haven, Pa.* Railroad Frogs. This Frog is cast in sections and chilled to render it durable.

938. M. Whitney, *Proprietor, Manchester, N. H.* Hazelton's Combination Water Wheel. The advantage claimed by the inventor for this Wheel, is principally in the form given to the buckets, which is both radial and tangental. The wheel is cast in one piece. The water is admitted to the outside circumference, and discharges on the under side. Some different arrangement for convenient access to the wheel, in case of an obstruction, would be an improvement,—otherwise the wheel appears to be of good design. *A Diploma.*

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BUILDING MATERIALS AND HARDWARE.

NATHANIEL J. BRADLEE,	DANIEL DAVIES,
MILTON J. STONE,	CHARLES WOODBURY,
JOSEPH E. BROWN,	WM. G. BROOKS,

Judges.

THE duties of this Committee have been largely increased over previous years, on account of the addition of the Hardware Department, and a number of articles from those which have heretofore been referred to other Committees; the number submitted to them is now one hundred and twelve—an increase of sixty-eight over that of 1853; and we are happy to state that there has also been a corresponding increase in the character of the work presented, which, as a whole, is far superior to former exhibitions. The Committee have examined with great care the various articles on the schedule referred to them, and would recommend the awards as per report annexed.

2. CHARLES E. FLAGG, *Sherburne, Mass.* Platform Supporter. This is a portable bracket, which may be found useful under some circumstances.

13. MARTIN L. BRADFORD & CO., *Boston.* One Case of Cutlery. A Card of American Shears. Also a Case of Fishing Tackle. This case of Cutlery, and that of No. 72, contain too many articles of foreign manufacture to come under the notice of the Committee. Mr. Bradford has received a Silver Medal, for Fishing Tackle, at a previous Exhibition.

21. BRIGHAM & CO., *Boston.* Six Pieces Drain Pipe.

43. S. H. CLAPP, *Malden, Mass.* Specimen of Tiles. Well made, good article.

55. FRANKLIN REED, *Canton, Mass.* Masons' Tools, Shoe Knives, &c. The Committee consider these very superior articles, and award a

Bronze Medal.

64. T. O. LEROY & CO., *New York*, by Dalton & Ingersoll, *Agents, Boston.* One Case Specimen Shot. A well-known article.

70. G. L. BAILEY, *Portland, Maine.* Improved Door Springs.

72. GROVER & MASON, *Boston.* Two Cases Cutlery and Fishing Tackle. See No. 13 for remarks on Cutlery.

80. FREDERICK BUTLER, *Lawrence, Mass.* Case of Files. Very fine article. *Diploma.*

84. Mark Worthley, *Boston*. One Case Young's Patent Extension Door Knobs. By a screw on the shank these are adapted to doors of various thicknesses, rendering them of convenient application. *Bronze Medal.*

103. John M. Dearborn, *Boston*. Specimen of Patent Scaffold. A very good staging for interior of large halls or public buildings. *Diploma.*

122. A. L. Jewell, *Waltham*. One Carpenter's Saw Clamp. A very good article. *Diploma.*

130. N. P. Burgess, *Boston*. Machine for Sanding Paint. The Committee could not see any advantage of this machine over those in common use.

132. Edmands & Co., *Charlestown, Mass*. Drain Pipe, Fire Brick, &c. A very good article. *Diploma.*

139. Chickering & Sons, *Boston*. Piano Forte Hardware. Very creditable to the manufacturers. *Bronze Medal.*

146. Chase Bros. & Co., *Boston*. Coal Hole Protectors. Well adapted for the purpose. *Diploma.*

174. G. H. Talbot, *Boston*. Ratchet Handle Auger.

180. L. Howland, *North Hanson, Mass*. One Case Carpet Tacks. A superior article.

191. Albert Field & Co., *Taunton, Mass*. One Card Specimen of Tacks. Very fine. *Diploma.*

196. Paul & McNutt, *Boston*. Specimen of Moulding, Sawing and Turning. Of superior workmanship. *Diploma.*

197. Peter Weiler, *New York*, by Jas. Fernald, *Boston*. Machine Mouldings. A very superior article. *Bronze Medal.*

214. Edward K. Russell, *Boston*. Three Doors—Specimen of Graining. Dark woods, fine. *Bronze Medal.*

217. C. H. Watkins, *New York*. One Specimen Self-cleaning Chimney Tops.

226. D. Phillips, *Douglas, Mass.*, by Gardner & Thayer, *Agents, Boston*. One Case Edge Tools. Good articles.

230. Massachusetts Glass Sand Company, *Boston*, by J. C. Fisk & Co., *Agents*. Three Samples of Glass Sand. A very good material.

234. Crafts & Beals, *Whately, Mass*. Drain Tile.

236. New England Roofing Company, *Boston*, by Levi L. Willcutt, *Agent*. Sample of Warren's Improved Fire and Water Proof Cement Roof. This is considered by the Committee an excellent article for composition roofs. *Bronze Medal.*

277. E. Carter, *Boston*. Specimen of Weather Strips. These have been in several of the past Exhibitions.

281. Allen & Noble, *Boston*, for the Manufacturers. Bed Screws. Locks. Sand Paper. Plows.

290. Silsby, Mynderse & Co., *Seneca Falls, N. Y.* Set of Planes. One Press. One Blind and Sash Model.

291. Dewhurst & Hope, *Lowell, Mass.*, by Dalton & Ingersoll, *Boston*. One Case Bolts and Screws.

310. S. C. & S. Winslow, *Worcester, Mass.* Screw Floor Clamps. An article of much merit. *Diploma.*

315. Hawes & Locke, *Boston*. Specimen of Stair Posts.

316. Samuel West, *Boston*. Specimen of Stained Glass. Of superior workmanship. *Diploma.*

327. Benedict & Burnham Manufacturing Company, *Waterbury, Conn.*, by Zelotes Hosmer & Co., *Agents*, *Boston*. One Case Gas and Chandelier Tubes. Excellent work. *Bronze Medal.*

341. Multiform Moulding Plane Company, *Boston*. One Case Planes. These Planes are of excellent workmanship, and an improvement is claimed on account of the handle, and the fitting of the irons. *Bronze Medal.*

349. John P. Farrar, *New York*. Samples of Cast Steel.

353. Wm. G. Reed, *Andover, Mass.* Model of Sheet Iron Roof. The Committee could not discover in this model any new design or application of the material.

355. S. S. Woodcock, *Boston*. One Frame Design for a House. Very fair drawing.

375. Wm. H. Maine & Co., *Boston*. Several Specimens of Soapstone Work. These articles the Committee consider the best pieces of work in this material that they have ever seen, each being finished complete in every part, reflecting great credit on the contributor. *Silver Medal.*

376. H. J. Newman, *Boston*. Imitation of Black Walnut, Light Mahogany, and Egyptian Marble. The light mahogany the best on exhibition. *Diploma.*

389. J. W. Wilson, *Boston*. One Wrought Iron Box. This and No. 486 and 711 were very neatly made.

391. W. J. McPherson, *Boston*. Specimen Graining and Marbling. Light woods, excellent. *Diploma.*

394. James M. Cook, *Boston*. Specimen Stained, Enamelled, Cut and Flock Glass. Very good specimens, received a *Bronze Medal* at the last Exhibition.

397. Samuel W. Frost, *Boston*. Coal Hole Protector.

411. Penrhyn Marble Company, Joseph Story, *Agent*, *Boston*. Chimney Pieces, &c. The articles exhibited are beautiful specimens of imitation of various marbles upon slate. This Company have received a high award at a previous Exhibition, and for the manifest advance in the manufacture since that time, the Committee award a *Bronze Medal.*

416. J. E. Butts, Jr. & Co., *Boston*. Wire Railing. A cheap, simple and excellent substitute for more expensive fences. *Bronze Medal.*

424. Enoch R. Morse, *Boston*. Iron Money Chest.

428. J. H. Stimpson, *Boston*. Improved Soldering Iron, Heated by Gas. Considered a good article for shop work. *Diploma.*

439. Mirror Marble Company, *Boston*. Mantles and Grates. These are made of iron and glass, and are quite ornamental and economical in price, and as they can be put up with a few screws and do not require any particular skill to set them, they are well adapted for export as well as domestic use, for which a *Bronze Medal* was awarded at the last Exhibition.

449. Tremont Iron Company, *Boston*. Three Kegs Nails, made of Swedish Iron. A good article and well made.

455. Wm. D. Gleason, *Boston*. Specimen of Wood Carving. Very fine. *Diploma.*

455. S. C. Bishop, *New York*, by Charles Stodder, *Boston*. Gutta Percha Cochituate Water Pipe.

464. A. Randall, *S. Braintree*, *Mass*. One Card Carpet Tacks.

476. Hiram Collins, *Salisbury*, *Mass*. Blind and Shutter Operator.

477. Lockwood & Lumb, *Boston*. Force Pump, Boiler, and Water Fixtures. *Diploma.*

478. J. Farris & Co., *Plymouth*, *Mass*. Sample Case Rivets.

484. Evans & Mayo, *Needham*, *Mass*. Specimens of Glue.

485. John Wilson, *Boston*. One Wrought Iron Box.

485. O. M. Fish, *Boston*. One Wrought Iron Box. Best on exhibition. *Diploma.*

498. American Bench Plane Company, *Winchester*, *Mass*. Six Iron Bench Planes. Quite a good article. *Diploma.*

512. Garnite File Works, *Manchester*, *N. H.*, by Dalton & Ingersoll, *Agents*, *Boston*. One Frame of Files. *Diploma.*

523. T. W. Hoxie & Co., *Boston*. Vitrified Drain Pipe, Calcined Plaster and Cement.

538. New England Screw Company, *Providence, R. I.* Gimlet and Wood Screws. These are great improvements over the common screw, but have received a medal at a previous Exhibition.

545. Matthews, Caldwell & Co., *Cincinnati, O.*, by C. H. Carroll, *Boston.* Model of Outcalt's Metallic Roofs. However well adapted this may be to other parts of the country, the Committee have their doubts about its practicability in this section.

549. R. J. Byram & Co., *Boston.* Specimens of Machine Carving on Wood. An excellent specimen and worthy a *Bronze Medal.*

563. Holland Chase, *Brunswick, Me.*, by Dalton & Ingersoll, *Agents, Boston.* Patent Shutter Spring.

578. A. G. Safford, *Boston.* Spike Extracter and Patent Window Springs. The Extracter, very good for R. R. spikes, and other heavy work. *Diploma.*

580. Wm. Pearce, *Boston.* Force Pump and Water Closet. Good articles.

581. Foot & Currier, *Boston.* One Set Soapstone Tubs and Sink. Very fair specimens. *Bronze Medal.*

582. George W. Haven & Co., *Boston.* One Case Diaphragm Filters. Have received awards at a previous Exhibition.

626. C. Merrill, *Malden, Mass.* Self-adjusting Sash Fastener.

627. William E. Gilman, *Boston.* Case of Locks.

631. A. D. Puffer, *Boston.* Lead Pipes Lined with Tin. Very good and new article. *Diploma.*

663. James Patterson, *Boston.* Show Case Mouldings. Neatly made. *Diploma.*

692. Charles E. Staples, *Worcester, Mass.* One Case Bit Stocks. Well finished.

695. Thatcher & Co., *Boston.* Keg Yellow Metal Nails. Also, Zinc Nails and Yellow Metal Spikes.

698. Douglas Axe Co., *Boston*, by G. Rogers. Case Axes and Hatchets. Excellent articles, and have been noticed at a previous Exhibition.

704. Enoch Robinson, *Boston.* Stand of Knobs. Improvement over those exhibited at the last Exhibition. *Diploma.*

711. W. H. Hinds, *Boston.* One Iron Box.

721. C. Henry Adams, *Boston.* Signs and Painting. Very good specimen. *Diploma.*

722. Essex Glue Co., *South Danvers, Mass.*, by E. W. Upton. Specimen of Glue. Excellent article. *Diploma.*

724. Albert Field, *Taunton, Mass.* Frame Tacks, Brads, &c. See No. 191.

725. M. S. Judd & Co., *New Britain, Conn.*, by Charles Brooks & Co. Case Sash Fasteners.

726. Charles E. Brown, *East Cambridge, Mass.* Improvement in Hanging Double Doors. The Committee were unable to discover any marked improvement.

754. Antony Cram, *Dorchester*, by John D. Reinard, *Agent.* Pump Lamps. Ingenious, but the Committee doubt their practical introduction.

758. Geo. F. Meacham, *Watertown.* Design for a Church.

763. Thomas S. Hudson, *East Cambridge, Mass.* Ventilating Window Panes. An excellent article, and believed to be entirely new. *Diploma.*

774. James R. Creighton, *Boston.* Blind and Shutter Operator.

779. Charles Parker, *Meriden, Conn.* Patent Blind Hinge Fastening, for wood or brick. Patent Union Coffee Mills.

788. J. Mason Reed, *Boston.* Jack Screws.

795. A. Wilber & Co., *Boston.* Vermont Roofing Slates. This slate improves every year. Received a silver medal last Exhibition.

805. James F. Woodward, *South Reading.* One Frame Awl Blades.

807. W. H. Woolley, *Boston.* Vise.

817. B. Stetson, *Uxbridge, Mass.* Improved Box Scraper. The Committee were much pleased with this scraper.

820. Boston Faucet Co., *Boston.* Five Patent Faucets. A new and very good article. *Diploma.*

837. Boston Sheathing Co., by Z. Southard, *Treas.* Three Specimens of Sheathing Felt. Very nice article. *Diploma.*

838. J. P. & F. L. Hamlen, *Boston.* Three Specimens of T Squares.

855. E. C. Barrett, *Boston.* Self-acting Water Closet Valve. Good article.

856. Streeter & Brown, *Shelburne Falls.* One Case Streeter's Patent Brace. *Diploma.*

870. William Goodwin, *Boston.* Brass Safe. There was a placard on the outside of this safe, stating that any person depositing twenty-five dollars, could have the privilege of attempting to open the same, and thus obtain one thousand dollars. The Committee felt unwilling to make the

deposit, and therefore did not examine the interior. The exterior presented a neat appearance.

896. WHEELER & DOANE, *North Dana, Mass.* Stair Posts.

903. L. BROOKS, by J. W. Worthen, *Boston.* Patent Level and Saw Set. Level handsomely finished.

904. DANIEL E. TRUE, *Lake Village, N. H.* Apparatus for Opening and Closing Window Blinds.

914. A. W. AKERSON & Co., *Cambridge, Mass.* Monkey Wrench.

916. A. G. BATCHELDER, *Lowell.* Improved Blind Hangings.

1006. THOMAS BROWN, *Marblehead, Mass.* Case of Glue. Very superior. *Diploma.*

1417. ALFRED BURDETT, *Baltimore, Md.*, by J. H. Guardenier. One dozen Planished Tin Boards.

1702. P. F. DODGE, *Boston.* Case of Pianoforte Hardware. *Diploma.*

STOVES, FURNACES, RANGES, VENTILATORS, AND GAS METERS, BURNERS, &c.

DR. A. A. HAYES,
JOHN COWDIN,
A. ANDERSON,
WILLIAM B. ROGERS,
GEORGE H. FOOTE,
Judges.

ON entering upon the duties assigned to them, your Committee found a variety of useful inventions submitted for examination. Among them the most important were furnaces for warming dwellings. The peculiarities of these constructions were pointed out to them by the inventors, when information was needed, apart from their own experience and observation, since this mode of warming has been in use here. A proposition to test the merits of the principal forms, by comparative trial was early made to the exhibiters by the Committee, which was accepted by several, but a more considerate view of the subject showed that the time of many weeks would be required for obtaining satisfactory results. They therefore availed themselves of another course — that of studying the efficiency and defects of the early forms and the modifications which have been made by inventors up to the present time ; abundant materials were then placed in their hands, and they do not know that any important points have been overlooked.

In considering the construction and working qualities of the different furnaces for warming, included in the Exhibition, the Committee have been impressed by the fact that, with perhaps two exceptions, these arrangements do not present any essential novelty, either in their principle of action or their mechanical adjustment of parts. Without being actually servile copies of former constructions, they are in general little more than modified repetitions of old and well-known forms. While in plan and workmanship they compare favorably with the best furnaces in use in the other cities of the United States, they would seem generally to present no important deviation from the stereotyped ideas which have continued for many years to guide inventors in this branch of construction.

Such a result can hardly be regarded as surprising, or as discreditable to the inventive genius of those who have occupied themselves with the subject, when it is remembered that there are few problems in practical science involving such various and complex conditions as that of producing a warming apparatus, which shall be at once efficient, economical and healthful in its operation. The inherent difficulties of this problem will be best illustrated by a brief summary of the functions and requisites of a perfect hot-air furnace.

I. To secure the *efficiency and economy* of such a furnace, two things are necessary.

First. The fuel employed should be as completely as possible consumed in the body of the apparatus, leaving little or none to escape, in the form of combustible gas or smoke, or to remain behind in the vitrified condition of clinker. A combustion thus complete can only be attained through a nice adjustment and distribution of the draft, and such form and adaptation of the stove chamber and contiguous cavities as will detain the evolved combustible gas until it shall be entirely burned.

The fire pot should not be a focus of intense heat, but the heat generated in it should be rapidly conducted or radiated from it. In the general adaptation a regular combustion of an adequate quantity of fuel should be provided for, and the regulation of the consumption ought to depend on the proportion of air admitted to sustain it. It is a very common impression that smoke-consuming furnaces and close air stoves, are economical in the consumption of fuel as the escaping products have a low temperature. A careful examination of the amount of surface will teach any one that this, with the advantage arising from retarded draft, sufficiently accounts for the fact that under the production really of *less* heat more warmth is radiated. The close stoves in fact distill the fuel or allow of only an imperfect combustion, by which more than one half the heating effect is lost, and gases dangerous to health are accumulated and escape into the apartment.

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Second. The heat evolved in the air chamber and its connexions, should with the least possible loss be transmitted to the air of the apartment or building which it is the design of the furnace to warm. To attain this end through the medium of the air chamber, it is necessary to have regard to the extent and form and radiating as well as conducting character of the surface of the stove, to the mode of entrance and distribution of the inflowing air, and to the prevention, as far as possible, of the escape of heat through the walls of the air chamber itself.

II. To secure the *healthful operation* of such a furnace, three principal conditions are to be observed.

First. The gases produced by combustion of the fuel must not be suffered to mingle, even in minute proportions, with the air which is to be inhaled. Of these the most noxious are the carbonic oxide and sulphurous acid gases. The former, when the action of the furnace is perfect, undergoes a further combustion, converting it into carbonic acid—a less noxious product; but the latter, or sulphurous gas, is entirely incombustible. It is evolved in considerable quantity from even the purest varieties of anthracite, is especially prone to escape, and is eminently deleterious when breathed habitually, even in small amount. To guard against such a result, the stove must be constructed with as few junctures as possible; and these must be so formed and so connected as to remain air tight, in spite of the warping, and the alternate expansion and contraction of the materials due to changing temperature.

Second. The air of the air chamber must be warmed evenly and adequately, without bringing it into contact with surfaces so highly heated as to cause the organic matters contained in it to be burned or otherwise chemically altered. In order to fulfil this condition, the arrangement must be such as to present to the included passing air a large warming surface heated to a moderate temperature.

Third. The air, in being supplied with an increase of heat in the air-chamber, must also be supplied with a *corresponding increase of moisture.* This is requisite to maintain its natural degree of humidity, or that appropriate to the temperature, without which it is felt to be unpleasantly dry, and when habitually breathed, proves highly detrimental, and even ruinous, to the health.

Such are the leading requisites of a perfect hot-air furnace; and to unite them all in one and the same construction, is the difficult, and, as yet, unattained result, to which the ingenuity and science of our inventive mechanics ought to be earnestly directed.

Since the first introduction of the hot-air furnace, in the shape of the Cockle or Belper stove, constructed by Mr. Strutt, in 1792, it would seem that nearly all the innumerable forms, which have been patented in England and this country, have retained the same general plan, and have aimed to secure increased economy and efficiency of heating power, by different modifications in the form and position of the parts of the stove and the surrounding air-chamber. That much progress in these respects has been made since that time, especially in the application of anthracite coal in the air furnaces of this country, must be admitted by all who have considered the subject, and could easily be shown on comparing the operation of the furnaces now on exhibition with those in use fifteen years ago. But, while there is great room for improvement in the economy and efficiency of most of these arrangements, there is yet more to be done in securing the purity and healthful humidity of the air which is warmed by them. On this point, the Committee think that they cannot speak too emphatically, as the complaints of families, schools, and public assemblies, using these arrangements for warming, afford melancholy evidence in many cases of the unpleasantness and insalubrity of the atmosphere which they provide.

Among the various forms of furnaces included in the Exhibition, the Committee have been gratified to meet with two which possess more or less novelty in the principle of their action and the adaptation of their parts. These are, the Warming Apparatus of Dr. Bolton, of Virginia, in which the air-chamber is filled with spiral scraps of sheet metal; and the Cone Furnace of our townsman, Mr. Chilson, the prominent features of which will be noticed hereafter.

That the former offers a very efficient means for imparting, equally and completely, to the air the heat emanating from the furnace, can hardly be doubted, when we consider the great extent of the surface brought into play, and the thorough intermixing of the air in the air-chamber, by the continual breaking up and deflexion of the partial currents. The Committee have indicated their appreciation of this novel and useful feature, by the award mentioned in this Report.

In the Cone Furnace, the distinctive feature of conical tubes converging upwards from the fire-pot, was early recognized by the Committee as a construction founded on philosophical principles, and from which an increase of heating power might be anticipated. With the view, however, of testing this conclusion experimentally, two of their number have conducted a series of comparative observations on successive days, using a small stove, surmounted in the one case by a cone and in the other by a cylinder of about the same base and altitude. This trial, without pretending to the precision of scientific research, was sufficiently exact to furnish a reliable ground of general comparison; and the Committee do not hesitate to say that its result has confirmed the impression of the superiority of the conical forms.

488. **Boston Gas Meter Works.**, J. R. **Darracott**, *Agent*, *Boston*. Gas Meters and Gasometers. A complete assortment of sizes of Gas Meters, with Models. The meters show the present state of the manufacture of this important instrument. Some of these meters are supplied with a reservoir which, being filled with water, supplies to the meter a portion corresponding to the quantity of water evaporated, and causes the initial line to remain constant. They are all excellent in pattern and workmanship. The Gasometer, adapted to testing meters, moved steadily under slight pressure, and presented the general characters of a correct instrument.

Silver Medal.

497. **Andrew J. Morse**, *Boston*. Soda Fountain. Patent Carbonic Acid Generator and Counter Stand. The Generator is a novel arrangement for producing carbonic acid in the manufacture of soda water. The Counter Stand is a double metallic can, holding a coil of block tin pipe, surrounded by ice. Excepting the use of metallic lead in a connecting pipe, the Committee approve of this apparatus, and award a *Bronze Medal.*

584. W. G. **Harris**, *Boston*. Stoves. Some of these were especially adapted to small families. The very general use of these forms attest their good qualities.

Fire Frame. A beautiful specimen from the Mirror Marble Company, whose work has become justly celebrated.

499. S. H. & M. C. **Walker**, *Boston*. Gas Generator. The Committee could discover no merit in this invention.

Car Axle. One wheel being fixed, the other revolves by a cylindrical axle engaged in the centre of the fixed axle, allowing of more freedom of motion on curves. Use under varied conditions only, would test the merits of this invention.

507. T. **Bartlett & Sons**. Rotary Parlor Stove. This is a basket stove.

508. C. **Evans**, *Charlestown*. Revolving Grate in Cooking Stoves. An adaptation of an air-chamber protects the moving parts from change of form by heat, and those of us who have seen the stove in action commend it for efficiency and novelty. *Bronze Medal.*

789. J. M. **Read**, *Boston*. New Era Parlor Cook Stoves. In this case the convenience and economy of a cooking stove are secured ; and when not in use for working, the top, covered by an ornamental casting, presents a neat appearance. *Diploma.*

Also — Ranges, with water backs adapted, the front being simple, like cooking stoves.

221. Pond & Duncklee, *Boston.* Brick Furnace. The iron castings of this furnace present a somewhat complicated flue arrangement.

Two Portable Furnaces, convenient for partial heating of dwellings.

Two Parlor Stoves. Good forms and well cast. *Diploma.*

437. Gardner Chilson. Furnaces for Heating Dwellings. In these furnaces the inventor has applied the principle of using hollow cones terminating in small openings, which enter a circular reservoir or hollow ring, supported over them, from which the products of combustion are led by a flue pipe, to prevent the escape of heat. Soapstone facings for the pots are used, and the reversed conical ring of the fire-place is more shallow than usual. In general form there is a wide departure from the furnaces in use, the products of combustion being divided into six or eight separate portions, and instead of the usual contraction merely, the heat is brought by means of the cones in contact with the air, sweeping over their surfaces to be heated. Much care has been bestowed on the junctions; each flange enters a depressed annular groove, and is packed by cement of a durable character. This combination displays a large share of invention in adapting the principle to the desired end, and merits the highest commendation. *Gold Medal.*

613. L. C. Dale, *Boston.* Coal Screener. A rocking screen presenting some obvious advantages over those in use. *Diploma.*

615. J. L. Douglass, *New York.* Kidder's Gas Regulator. A device, now quite well known, for ensuring regularity of pressure in distribution pipes for gas. This form is one exhibiting ingenuity, and in use they have been highly approved for constancy of action. The Committee award a *Silver Medal.*

616. Samuel Down, *New York.* Dry Gas Meter. This meter has its rack and pinions encased, so as to prevent the action of humid gas on the delicate work. It presents very little leather surface to the gas. In New York these meters are highly approved, and we need only the experience acquired under varied applications, for forming a favorable opinion of their merits. *Bronze Medal.*

617. Hanson & Hersey, *Boston.* A Furnace, or Heater. A Parlor Stove. This furnace has a globular fire-place; the products of combustion are divided by tubes as flues, and these, with the cylindrical drum above them, are of stove sheet iron. The joints are all defective, no provision being made for expansion and contraction.

A Parlor Stove. Nearly the usual form. Neat castings.

Cook Stove. A form in general use.

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643. John Wright, *Wilmington, Del.* Smoke House. This is a very judicious arrangement of smoke generators and distributors. The generators are attached to the outside of the building, and by varying the fuel, either heat or smoke may be produced. As the structure below is a paved or incombustible surface, no risk from inflammation, and no loss from want of cleanliness can occur. The Committee award a *Diploma.*

655. A. H. Wood, *Boston.* Gas Burner. This is the form of burner known as Wood's Burner, the first invention in point of time introduced here, which acts on a simple principle, and the only one having a distributor. It is this burner which produces the broad flame seen in shop windows, and consumes the gas with great economy. The Committee recommend a *Silver Medal.*

658. Boston Stove Foundry, J. H. B. Henderson & Co., *Agents.* One Stove.

666. Moses Pond & Co., *Boston.* Furnaces, Stoves, Ranges. These ranges have been long in use and are highly approved.

688. Boston and Maine Foundry Company. Cook Stoves, (several sizes.) The excellence of the castings and simplicity of form in these stoves are worthy of remark, and we learn that under observation of some of the Committee, these stoves have given entire satisfaction. The same remarks apply to the parlor form of stove. *Bronze Medal.*

821. S. N. & H. G. Ufford, *Boston.* Ventilator. An ornamental form of Ventilator long in use, and approved.

Fire-place. On the plan of the old English fire-place, but a beautiful specimen of American workmanship. *Bronze Medal.*

Reed's Patent Hot Air Furnace. No novelty worthy of note as an invention.

854. D. C. M. Rupp, *Boston.* Hoad's Patent Gas Regulator. This article differs from Kidder's in several points, especially in the adoption of the spring. Deeming these instruments important, the Committee award for the invention, a *Diploma.*

866. Samuel Down, *New York*, by J. W. French, *Boston.* Wet Meter. An experimental meter which registers in a peculiar manner. The workmanship and action of the instrument are excellent, and sustain the reputation of the manufacturer.

671. Cyrus Carpenter. Elevated Oven and Range. A neat, compact and economical arrangement, deserving approbation. The Committee award a *Diploma.*

A Furnace exhibited presented no novel feature of importance.

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674. C. H. Spence, *Boston.* Mantel and Parlor Grate Patterns.

751. Charles H. Johnson, *Boston.* Improved Patent Gas Burner. This is known as Johnson's Burner, and is the one adopted for street lighting in Boston. Its principle of action is the same as in Wood's Burner, and it is known to be economical in use. For the improvement made in public lighting, the Committee award a *Silver Medal.*

755. Neal & Emery, *Boston.* Gas Burner. By substituting coarsely ground quartz for modified internal structure, the inventor here accomplishes a diminution of pressure at the tip of the burner, at the risk of the interstices in the quartz becoming filled and closed. Two small diaphrams would produce the same effect. *Diploma.*

395. B. W. Duncklee & Co., *Boston.* Stewart's Air Tight Cook Stove. A very workmanlike addition to the convenience and comfort of a stove for warming; highly desirable for small families. *Diploma.*

101. Model Rotary Furnace.

413. John Spence & Sons. Furnaces and Ranges. This is a globular form of chamber supported over the fireplace of an ordinary furnace. The form, with slight modifications, has run through many constructions of this kind, but the present furnace, for its working draft, depends on a conical tabular flue brought from the top of the globe to near the burning fuel. The superficial extent of the globe is large, and there is a direct draft tube for kindling with damper, left to the care of a servant. This furnace must have two distinct actions — simple, with the direct draft open as a heater,— complex, when the working draft is alone acting.

Side-oven Range. This exhibits a judicious arrangement of the flue surrounding the oven, which is on one side, and very convenient. For invention, a *Silver Medal.*

454. G. Blish, *Boston.* Stove Polish. A useful article, carefully made.

859. H. & F. Stimpson. Cooking Ranges. The sample of a range which for many years has been a favorite over a large extent of New England.

859. H. & F. Stimpson, *Boston.* James' Hot Air Furnace. This furnace embraces the horizontal radiators, which are attached to the furnace so as to form one compact mass, alike influenced by expansion and contraction. The fire pot is peculiar, and consists of rings, by which form of construction the breaking of pots in single castings is measurably prevented, and repairs easily made. To the furnace is attached the extremely simple device of Prof. Treadwell, by which the direct draft pipe is closed whenever the re-

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quired heat from kindling is produced. The combination here made prevents carelessness, and for the adaptation we award a *Bronze Medal.*

859. H. & F. Stimpson. Bolton's Caloric Furnace. This arrangement for heating air was invented in Richmond, Va., and is exhibited here for the first time. Its adaptation to use in other cities is known from observation to one of our Committee, and it includes a novel feature of value. By the conducting power of a large mass of coiled fragments of sheet iron the heat of the fuel is absorbed. The air supplied from without is divided and passed through the interstices of this heated mass, of which it takes the temperature. This is, in fact, reversing the use of diaphrams, as adopted by Erricson for cooling air. To the inventor a *Bronze Medal.*

931. William F. Shaw, *Boston.* Gas Stoves and Heaters, Cooking Stoves, Ranges and Impermeable Pipe. These are simple but very ingenious inventions, for the use of illuminating gas as a heating agent. At the last Exhibition an English Range was in use for cooking every variety of food, and the practical advantages of the application were demonstrated. The Committee find that during the three years which has since elapsed, the inventor of these forms of apparatus has given the subject his undivided attention. This is evinced in the serious obstacles he has overcome, and the completeness which his devices exhibit. For his improvements relating to transmission of gas, and consuming it without odor, and for the variety and simplicity of his Stoves, Heaters, Ranges, &c., the Committee award a *Gold Medal.*

920. D. G. Littlefield, *Albany, N. Y.* Railway Stove. The principle of the Parlor Stove of Dr. Nott has been applied in this stove to the combustion of anthracite.

A stock of fuel is retained in a plate in such a way as to fall of its own weight to the point where consumption takes place in a limited portion of air. The narrow flues are well calculated to give up the heat to the air. In form and finish this stove is worthy of high commendation. For beauty of form and excellence of castings, the Committee award a

Bronze Medal.

880. Samuel Down, *New York.* Dry Gas Meter, single valve. We refer to what has been stated before. No. 616.

771. Edward Whitely, *Boston.* Hotel Cooking Apparatus. A very good arrangement, adapted to cooking on almost any scale. Connected with this is a compact steam cookery, which makes it complete and efficient, admitting a variety of application. For the invention and good judgment displayed, the Committee award a *Bronze Medal.*

810. Lewis Jones & Son, *Boston.* Ventilator. Well known and approved as "Emerson's," and which has received the highest award of a Gold Medal at a former Exhibition.

Fire Frames, of New York workmanship; neat articles in form and of high finish.

685. W. & W. F. White, *Boston.* Furnace with Radiator. This has some peculiarities, and has been often exhibited.

Range. This appears to be a judicious arrangement in its parts, and has received favorable testimonials. For its good points, we award the inventor a *Diploma.*

IRON, BRASS, AND COPPER CASTINGS.

George S. Griggs,
George Darracott, Jr.,
Gilman Joslin,
Judges.

45. Augustus F. Leeman, *Boston.* Frame of Brass Casting. A fine specimen of brass casting, and beautifully finished; it evidently shows great care and skill in its production. *Diploma.*

175. George Neilson, *Boston.* Cast Iron Paving Blocks. This paving is of new and peculiar construction, the inventor claiming some advantages over the other patterns of iron paving. The Committee are unwilling to receive or reject these claims, as they consider the only proper judgment on the advantages can come from their practical use. The Committee would take much interest in seeing it properly tested by our city government.

526. Benedict and Burnham Manufacturing Company, by Z. Hosmer & Co., *Boston.* Sheet of Brass. A beautiful specimen of the perfection to which this branch of our mechanical industry has been brought; and all mechanics who have occasion for the use of so large a plate, will find they are saved one half their labor, in the perfection of this manufacture. *Silver Medal.*

146. Chase Brothers & Co. Entrance Gate. Cast and Wrought Iron Railings. This branch of industry is claiming a good share of public attention, and from the specimens exhibited it is evident that the manufacturers are determined to keep pace with the public wants, in the beauty and utility of their designs, as well as the finished manner in which their work is executed. The Entrance Gate is calculated for a cemetery and carriage way, and is beautiful in design and execution. For this, and their extensive assortment of iron railings, the Committee award a *Silver Medal.*

148. The same firm exhibit for Janes, Beebe & Co., of *New York*, a variety of Furniture and Ornamental Articles of Iron. The figures of stags, dogs, and garden statues are chaste in design, and well-adapted to the purpose for which they are intended. The Committee award to Janes, Beebe & Co., a *Bronze Medal.*

147. George R. Jackson & Co., *New York*, by Chase Brothers & Co., *Boston.* Prismatic Sidewalk Lights. A *light* and good article for the use designed, and the Committee think the advantages they would claim are obtained. *Diploma.*

159. Davis & Eames, *Lowell*, by Nourse & Co., *Boston.* Cast Iron Wheel Jacks. The Committee would recommend these jacks to all who prefer them to other kinds. They certainly are more portable. *Diploma.*

350. Bay State Iron Company, *S. Boston.* Railroad Iron. The specimens exhibited were of good pattern and well manufactured. This Company, we understand, are now successfully competing with the English manufacturers in this article, now so indispensable to the business of the country. We believe these are the only works in New England which have commanded the requisite skill and energy to contend with the foreign article. The works are located at South Boston, and are probably the very best in the United States, if, indeed, they are surpassed by any in the world ; and the managers deserve what we are happy to know they are now receiving, the fullest encouragement from railroad companies, especially those in New England. The Company have recently improved the quality of their rails, by introducing a different kind of stock from that hitherto used. We noticed one of the rails on exhibition, which was broken to show the quality of iron used, and found that the *tread* of the rail was of hard, fine-grained iron, while the base was a tough, fibrous iron. For excellence in this manufacture, we recommend a *Silver Medal.*

927. Henry N. Hooper & Co., *Boston.* Fourteen Church Bells. Our generous contributors in this branch have not lost one jot of their well-earned fame in this department of their business. Indeed, we question if they have not "outdone" themselves. Too much praise cannot be bestowed upon these specimens of their experience and skill. We speak of them as "castings." We do not understand it as belonging to our duty to speak of their tone, though, so far as we may be allowed to express an opinion, we would say, they are all their makers intended them to be. Their motto is "Perfection." Having received, heretofore, the highest awards from this Association, and the high commendations always justly bestowed upon their work, these will be to them a reward far more consonant to their feelings than any additional Medals and Diplomas.

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AGRICULTURAL IMPLEMENTS.

Simon Brown,	Benjamin Shurtleff,
Leonard Stone,	William Buckminster,
William G. Lewis,	*Judges.*

Your Committee is composed of farmers, and of that class which appreciates the blessings conferred upon the art of Agriculture by the Mechanic. They are willing to confess, that the genius and skill of the mechanic has greatly lightened and facilitated their labors, and consequently increased their profits.

Indeed, improvements in the machines and implements of the farm, have been presented faster than the farmer — naturally conservative and slow to change — has been willing to receive them. But their merits are so obvious, that upon witnessing a fair trial of most of them, a large majority of persons are eager to avail themselves of the wheels and springs, and power of the oxen and horse, instead of their own personal strength.

We look upon the mechanic as an intimate and indispensable co-worker in our art, and that while we make two spears of grass grow where only one grew before, it is mainly through his instrumentality that we are enabled to do it at a *profitable rate.*

Such being our views, it was with an earnest interest that we entered upon the discharge of the duties which we were commissioned to perform. Although the articles in our department were numerous, and our personal engagements pressing, we gave them all that care and critical examination which their importance demands.

Among the articles on exhibition, there were several large invoices of Agricultural Implements, each containing various specimens of fine workmanship, and of great practical utility.

Among these implements our attention was especially arrested by the number of variously constructed plows, from the light one-horse plow, to that designed for meadows, where clustering roots of the ancient forest, and hassocks, dispute the progress of reclamation. They were fitted for every variety of soil and location, and made of such material, and in such a workmanlike manner, as to reflect credit not only upon the mechanic himself, but upon your Association, which fosters and encourages the Mechanic Arts. We had used the old Dutch plow, with its stubbed nose and short and almost perpendicular mould-board, and when we summoned it before us and contrasted it with those in our presence, so compact, symmetrical and effective, we looked on the plow, not only as the pioneer of civilization, but as one of the greatest blessings conferred on man.

In these invoices there were grain mills, mowers and reapers, sifters, pumps of various devices, cider mills, corn shellers, peat diggers, yokes, rakes, for horse and man power, scythes, and scythe-fasteners, vegetable cutters, orchard and garden tools, stump extractors, washing machines, hand carts, barrows, garden engines, &c., &c.

In each of these groups of implements, there were some of the same kind, such as plows, for instance, but in all the material used and the workmanship were of marked excellence; we are glad, therefore, of the opportunity to express our approbation of the implements, and of that public spirit which induced the several firms to present them for the public inspection. We had used most of them, and our judgments were based upon an actual experience.

Among the articles still greatly needed, and especially at the west, is a *Corn Husker*, (No. 95.) Two were presented, which a portion only of your Committee had seen in operation. It is hoped that the slow and tedious process of husking by hand may yet be abandoned in favor of some cheap and effective machine.

The *Wheel Hoe*, simple and cheap as it is, will be found by all an important acquisition on the farm.

Knox's *Gang Plow*, (No. 284) is another implement, as yet but little used, but one of great promise. No one of your Committee can speak of it from personal experience, but excellent judges who have tried it, recommend it in high terms of approbation.

To each of these invoices, being numbers —

166. PARKER, WHITE & GANNETT, *Boston;*

284. NOURSE, MASON & CO., *Boston;*

610. NOURSE & CO., *Boston;*

783. BLAKE, BARNARD & CO., *Boston,*

They recommend the award of a *Silver Medal.*

12. CRESSON, STUART & PETERSON, *Philadelphia.* Magic Corn, Cob and Grain Mill. *Diploma.*

95. JONATHAN PERKINS, *Donelsonsville, Conn.* One Corn Husker.

98. D. F. RANDALL, *Chicopee.* Apple Parer.

111. CYRUS J. FAY, *North Lincoln, Mass.*, by Joseph Breck & Son, *Boston.* Hay and Cotton Press.

117. J. W. KINGMAN, *Dover, N. H.* Machine for Milking Cows. *Diploma.*

123. J. A. AYRES, *Hartford, Conn.* A Self-Acting Gate. A Self-Acting Farm Well. *Diploma.*

125. E. W. Kelley, *Milbury, Mass.* Cattle Leader.

128. John P. Adriance & Co., *Worcester.* Manny's Combined Mower and Reaper. *Silver Medal.*

149. Samuel Harris, *Springfield.* Three Coal, Sand, or Seed-Sifting Machines. *Diploma.*

168. Henry F. Glover, *West Dedham.* Cranberry Rakes.

171. A. H. Grenell, *Springfield,* C. H. Hubbard, *Agent, Boston.* Grape Vine Protectors. An ingenious contrivance. *Diploma.*

186. Edmund Brown, *Lynn.* Graduated Tunnel Measures.

189. James Gay, *Boston.* A Churn.

198. B. B. Belcher, *Chicopee Falls,* by Hiram Blackmer, *Boston.* Two Self-Sharpening Hay Cutters. *Diploma.*

200. E. French, *Braintree.* Bucket Pump.

227. E. P. French & Co., *Nashua, N. H.* Hand Cart. Canal Wheelbarrows. Common Wheelbarrow. Wheel Hoes. Common but substantial articles.

231. Parker, White & Gannett. Hickok's Portable Wine and Cider Mill. *Diploma.*

284. Nourse, Mason & Co. One Double Steel Plow. *Silver Medal.*

284. Nourse, Mason & Co. One Ketchum's Mower. *Silver Medal.*

284. Oliver Ames & Sons, *Easton, Mass.* Case of Shovels and Spades. *Bronze Medal.*

288. Mansfield & Lamb, *Smithfield, R. I.* Case of Scythes. One Scythe and Snath. Well known and well made.

304. J. H. B. Henderson & Co., *Boston.* Apple Parer and Slicer.

305. Abraham Fitts, *Worcester.* Peat Digger. *Diploma.*

324. Anselm Davis, *Boston.* Patent Corn-Husking Machine. *Diploma.*

328. T. H. Leavitt, *Boston.* Corn Sheller.

361. Luther Whitman, *Winthrop, Maine.* Double Wheel Hoe.

362. Ammi Whitney, *Boston.* Patent Meal Sifter.

364. Emmons T. Fletcher, *Boston.* Patent Horse Radish Grater.

386. Dewey Phillips, *Shaftesbury, Vt.* Farm and City Gate.

441. Cushman & Marston, *Brighton.* Patent Pig Trough.

520. H. Blackmer, *Boston.* Wooden Tubing for chain pumps.

521. J. G. Lovejoy, *Cambridge.* One Hay Cutter.

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533. Charles W. Brown, *Boston.* Portable Grist Mill. *Diploma.*

550. J. B. Aldrich, *Boston.* One Ox Yoke.

576. E. D. Smith, *Boston.* Two Wheel Hoes. Six Butter Stamps. Two Butter Moulds.

577. J. & B. Kimball, *Springfield, Vt.* Spring Tooth Horse Rake.

600. J. O. Wilcox & Son, *Woonsocket, R. I.* One Grain Cradle. Bundle of Rakes.

606. James M. Adams & Co., *Canton, Mass.* Case of Ships' Scrapers. Garden Trowels. Spoke Shaves, &c. Very fine. *Bronze Medal.*

610. Nourse & Co., *Boston.* Gales' Eagle Straw Cutter. *Diploma.*

611. Edward Fitzgerald, *Boston.* Patent Water Sprinkler.

637. Billings & Bryant, *South Deerfield, Mass.* Corn Planter and Fertilizer. *Diploma.*

716. Charles P. Carter, *Ware, Mass.* Apple Parer. *Diploma.*

719. W. P. Greenleaf, *Washington, N. H.* Scythe and Fastening.

753. David Baker, *New Bedford.* Weeding Tongs.

783. Blake, Barnard & Co. Michigan Plow. *Silver Medal.*

798. Clement & Marsh, *Boston.* Butter and Cheese Tryers.

803. A. Doe, *Worcester.* Hill Side and Level Land Plow.

809. D. Bowers, *Contocook, N. H.* Garden and Orchard Tools. *Bronze Medal.*

813. J. A. Smith, *Boston.* Patent Peat Cutter.

844. W. K. Foster, *Bangor, Maine.* Patent Cheese Cutter.

877. J. S. Kelley, *Brighton.* Bulkley's Patent Steam and Hot Air Kiln Dryer.

884. W. W. Miller, *Orange, Mass.* Model of a Stump Machine.

889. Stevens, Peck & Co., *Brookfield, Vt.* Hay and Manure Forks.

892. Blake, Barnard & Co., for Whittemore, Harrington & Co. Apple Parer. *Diploma.*

906. L. J. Wicks, *Boston.* Hay, Corn Stalk and Straw Cutter. *Diploma.*

MILITARY GOODS, FIRE ARMS, &c.

B. F. EDMANDS, EBENEZER W. STONE,
E. A. C. ROULSTONE, *Judges.*

THE number of articles assigned to the Committee for examination has been few. Our inspection has resulted in recommending to the Association the following, as deserving their notice; and we class them in the different "grades of award" to which our judgment would assign them.

64. J. DURELL GREEN, contributed by William Read & Son, *Boston.* Patent Breech Loading Arms: Carbine and Rifle. The established reputation of which renders any comments from us superfluous. *Gold Medal.*

64. ALLEN & WHEELER, *Worcester, Mass.*, contributed by Wm. Read & Son, *Boston.* Allen's Breech Loading Rifle. Exhibiting an improvement in construction which, we think, will, in some respects, make it a rival of the celebrated Sharpe's rifle. *Silver Medal.*

907. NORTH AMERICAN GUTTA PERCHA COMPANY, *New York.* The military articles manufactured by this Company, such as Coats, Caps, Haversacks, Canteens, Tent Floors, &c., &c. These articles will, we think, fully answer the requirements of military service. *Silver Medal.*

330. JOAB HAPGOOD, *Boston.* Case of Guns, Pistols, Sporting Materials, &c. Articles of splendid workmanship, among which we particularly notice the Telescopic Rifle. *Bronze Medal.*

387. WILLIAM F. SCHAFFER, *Boston.* Double Barrel Gun. A fine specimen of work for service. *Bronze Medal.*

64. ALLEN & WHEELER, *Worcester*, contributed by Wm. Read & Son, *Boston.* Allen's Self-cocking and Repeating Pistols, and Detached Stock Rifle. Articles whose excellence are apparent. *Diploma.*

388. FREDERICK GOTH, contributed by W. F. Schaffer, *Boston.* A Rifle. A well made, durable piece. *Diploma.*

602. A. G. FAY, *Boston.* Powder Cans. A neat and serviceable article. *Diploma.*

The above are all the articles which we think can properly claim premiums at this time. To some of the following we should have made recommendation for awards, but for the knowledge that they had received premiums at former Exhibitions.

868. AMES MANUFACTURING COMPANY, *Chicopee, Mass.* Case of Swords. The specimens this year sustain their well-established reputation, and similar articles have taken a Gold and a Silver Medal at former Exhibitions.

1667. Bent & Bush, *Boston.* Military Goods, such as Caps, Chapeaus, Military and Naval. These articles sustain the reputation which has gained medals on former occasions.

64. William Read & Son, *Boston.* Sharpe's Rifle. An arm, the reputation of which, for effectiveness, is so well established as to endorse fully the decision and award at the last Exhibition.

445. J. P. Schenke. Model of a Breech Loading Cannon. This is an ingenious arrangement, and comes nearer to effecting the object aimed at than any attempt known to the Committee. Ordnance which should be constructed upon the principle of breech loading, so as to stand the test of service, would be an important invention.

541. Charles R. Fisher, *Boston.* A Swivel Gun.

MARINE ARTICLES.

Robert B. Forbes, John H. Gliddon,
John S. Sleeper, Elias E. Davidson,
Benjamin L. Allen, *Judges.*

857. D. A. Taylor & Co., *Boston.* Ships' Pumps, Force Pumps, and others. The Ship Pump comes more especially under the notice of the Committee. It works easily, delivering a large quantity of water, is simple in its details, durable and easily repaired. The Force Pumps and the Faucet are good of their kind, for all of which is awarded a *Silver Medal.*

848. John West, *Chelsea.* Miniature Vessels.

836. John Flynn, *Boston.* Beautifully made Harness Cask. *Diploma.*

420. John T. Boyd and John T. Marston. Machine for Turning Down Rapidly and Equally the Edges of Canvass. This is a new machine, and is worthy of the patronage of sailmakers, for whom it is designed. *Bronze Medal.*

790. Robbins Cordage Company, *Plymouth, Mass.* Specimens of Rope and Yarns. The Yarns are the same as those in the rope—American hemp, untarred, smooth and fine; and the manilla yarn is the same as that in the rope, which is quite superior. *Diploma.*

865. J. Stewart Gwynne, *New York,* contributed by the Lawrence Machine Shop, *Lawrence, Mass.* Compensating Steering Apparatus.

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This machine is well made, though rather cumbersome. It has a spiral spring whereby sudden shocks to the rudder are somewhat obviated. This is a new machine, and is highly spoken of by *J. W. Griffiths*, of New York, who claims for the spring more value than the Committee seem willing to award to it. The speed increases when the helm or power is nearest amidships, and becomes slower when it is nearly hard up or hard down. But the general movement is far too slow, as compared to machines which have long been found in practice to be strong, simple, and effective.

858. THOMAS VALLELY, *Boston.* A Two-oar Race Boat. A fine model for speed, and well constructed. *Bronze Medal.*

916. JAMES E. SIMPSON, *Boston.* Model of Dry Dock, with a Model Ship in it. A neat piece of work, illustrating a good dock, a practical knowledge of which induces the Committee to award a *Silver Medal.*

752. P. A. SYLVESTER, *Boston.* A small Model of Reed's Ship Steering Apparatus. A machine well known, and considered as effective, though not so easily cleaned as some others. It is a subject of regret to the Committee that a full-sized machine was not exhibited.

Bronze Medal.

760. JOHN READ, *Charlestown, Mass.* Model of a Life Boat. This boat has double sides, enclosed in which, from the water line up, when not loaded, are zinc canisters or air-tight boxes. She has also a platform, under which are air-tight boxes of similar metal, and under a deck at each end are large canisters of the same. She has two valves to permit the water shipped to run out, which were found on trial to be too small for that purpose. A boat on this model weighing about 900 lbs. was constructed for the Massachusetts Humane Society, 23 feet long, under the superintendence of the Chairman of your Committee, and was by him personally tested at Gloucester on the 10th of Sept. The valves were opened, and over thirty persons, large and small, were put into her, which weight still left her well out of water, and quite stiff. Nine persons, including your Chairman, put off, and getting on the gunwale by considerable effort and by the aid of lines to the other side, capsized her; then getting on the bottom she was easily righted, the water being below the thwarts. She was then pulled out of the harbor, the valves being closed, and put into her shed by about ten men. She can never be overset by ordinary seas, and is a valuable boat for packet ships, steamers, and for coast life boats, where they can be manned in a sheltered place. She is rather heavy to launch in a surf, or to transport on a rough beach, but is lighter than Francis's metallic boat of same size.

Silver Medal.

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769. Russell Mills, *Plymouth*, N. Boynton & Co., Agents, Boston, Cotton Duck. This is a superior article with even selvedge, and made of good stock, and is highly recommended by practical sailmakers.

Silver Medal.

706. John Taggart, *Roxbury*. Model of a Fog Bell, Float or Buoy, to be sounded by the action of the waves, tides, &c. A desirable invention, if it works well in practice, as to which your Committee do not pretend to judge.

732. Emerson's Ship Windlass Company, *Worcester, Mass.* Emerson's Patent Windlass, worked by slow or fast power by a Capstan on the forecastle. This machine can perform with four men, the work usually requiring a dozen, and is a valuable element in the safety of life and property, more especially in these days of "ordinary seamen." Your Committee deem it well to add ends to the windlass, outside the bitts as usual, to serve occasionally. To this valuable machine the Committee award a

Gold Medal.

Specimen of handsome Wire Rope, made by the same Company, and which ought to be more generally used in sailing ships, as it is in steamers in England.

733. George P. Tewksbury, *Agent, Boston.* Allen's Power Capstan. The power is vastly multiplied by simply reversing the motion of the bars, or "walking back." As this capstan received the award of a silver medal at the last Exhibition, your Committee have only to recommend its general adoption in first rate vessels.

733. Geo. P. Tewksbury, *Boston.* Life Preservers. One well known and long tested as his Seat or Stool, which contains some improvements in shape since the award of a Bronze Medal at the last Exhibition. It is a cheap deck or cabin seat, and when tight and properly managed is a valuable life preserver, though open to the same objection which applies to all inflated or "air-tight" machines, namely, liability to leak. For recent improvements, a *Diploma.*

Mr. Tewksbury also exhibits a State-Room Life Preserver, in two parts, made of strong metal, to be strapped to the body; also good when tight and well managed. Also, a Life Preserver Jacket or Vest, an excellent article, filled by quilting in cork shavings, or cork particles. Also metal "leading trucks," for conducting the ropes from aloft along the shrouds to the pin rails. These are made of metal, and are good for those who like complete and somewhat costly fixtures.

734. James Emerson, *Worcester, Mass.* Chain Cable Stopper. Some time in use, and considered a good thing. *Diploma.*

568. Alexander Burns, *Boston.* A Wooden Bottle made of eleven Staves, hooped with Copper. A pretty toy.

630. Thompson's Graduating Life Seat Company, *New York.* A Life Preserver Seat — known as Thompson's. This seat has no air chambers, but owes its buoyant properties to blocks of cork covered by wood. It cannot leak, and with common care must be very durable. It is easily attached to the body, and is not very costly. In view of its exhibition before your society, the Chairman of this Committee has repeatedly tested its qualities on his own person, weighing 175 pounds, and found it worthy of defence against at least one of the recommendations of its friends or agents, Mr. Lindsay, who says, "a man desiring to be drowned could not effect his purpose while *sitting on this chair*;" also against the picture illustrating its merits by placing a man half out of water on a chair in a sea wave! Your Committee dwell somewhat at length on the merits of this life preserver, in the hope that it may be universally adopted on all passenger vessels, and particularly on those employed on our lakes, rivers and sea coasts. Many lives will be saved by this machine, as well as by Tewksbury's stool and other similar appliances, if generally adopted. To the inventor, the Committee award a *Silver Medal.*

661. J. Reed, *Marshfield, Mass.*, contributed by J. L. & R. H. McLauthlin, *Boston.* Model of a Patent Windlass and Capstan, which has a flange to prevent the cable from "riding," and which can be worked fast or slow at pleasure. The model is small, and the principle, though apparently good, is untested within the experience of your Committee.

Bronze Medal.

532. W. H. Webb, *Boston.* Caulker's Paying Machine. A pretty thing, but of little practical use.

536. Charles H. Porter, *Boston.* Rack of Cask Bungs. Smooth and nice.

567. John P. Ober, *Boston.* Harness Cask, and two White Oak Water Casks. Very fine specimens of work, but the Harness Cask would be better and cheaper with less of the polished brass work upon it. The casks are, however, all well and thoroughly made. *Bronze Medal.*

19. S. D. Poole, *Medford, Mass.* Welded Clinch Rings, for Ship Fastenings.

29. John W. Griffiths, *New York.* Model of an Iron Keelson. Worthy of consideration.

65. Edward Winsor, *Boston.* Specimen of Oars. Fine quality.

Bronze Medal.

73. Nathaniel McKay, *East Boston.* Model and Plans, &c., of a Clipper Ship. A fine model, got up with care. *Bronze Medal.*

90. Herbert Dede, *Medford, Mass.* Yacht Model. A peculiar model, well got up, and worthy of a fair trial. *Diploma.*

91. W. H. & T. A. Bridge, *Boston.* Devil's Claw, or Chain Stopper. An excellent thing for quickly releasing the chain cable. *Diploma.*

153. Crowell, Lewis & Co., *Boston.* Patent Steering Apparatus. It is a simple, cheap, somewhat noisy, and may safely be used in small vessels where space is wanting for an ordinary tiller. Further experience may prove this geer to be better than we now suppose.

160. Bartlett & Osgood, *Marblehead, Mass.* Bale of Oakum. Very nicely made, and of good, clean stock. This is an article of vast importance to the safety of life and property.

864. N. Tufts & Son, *Malden.* Ship's Bowsprit Lantern. A well made and valuable auxiliary to safety, which should be generally adopted on ships.

161. E. W. Page, *Boston.* Oars and Sweeps. Very creditable articles. *Diploma.*

490. Amageen & Wilson, *Boston.* Model of Ship's Windlass. The purchase is simple and not expensive, and can easily be adapted to slow and great power, or fast movement and smaller power by stoppering the chain. *Bronze Medal.*

459. S. W. Shelton, *Boston.* Applegate's Patent Chain and Cable Hooks. A Chain Stopper or Claw. Very useful in all ships. *Bronze Medal.*

509. Gould & Lamb, *Worcester.* Submarine Lantern. This is a contrivance for illuminating under the surface of the water, and may be useful for divers in their submarine explorations. The peculiarity of this lantern over others is its having the flame surrounded with two glass cylinders, one about half the size of the other, so as to leave an air space between, by which the inventors state that the vapor from the lamp is prevented from condensing on the glass, and dimming the light. How useful this may prove can only be determined by experience.

513. Robert Gardner, Jr., *Boston.* Hemp Rope. Hide Rope. Hemp and Hide combined and braided. Signal Haulyards. Very fine specimens of the articles. Made at the Charlestown Navy Yard. *Diploma.*

554. C. Allen Brown, *Boston.* An Oak Ship's Knee, bent by pressure from a straight stick by steaming. This is a most valuable invention, although this particular specimen is not so good an illustration of the art as

could be desired. Your Committee deem this *one of the most important inventions of the age,* and that after a more full development of its advantages it will merit the highest award of your Association, and in the meantime they commend it to the consideration and trial of shipbuilders. Mr. Thomas Blanchard, the inventor, is well known as a gentleman of inventive genius, second to none in the community.

559. F. N. Spear, *Boston.* One Cooper's Leveller.

560. W. H. Thompson, and E. P. Morgan, *Biddeford, Maine.* Patent Safety Hatches. Of doubtful utility on board of ships.

461. William Phinney, by Clapp & Goddard, *Boston.* Water Cask. A fine specimen. *Diploma.*

462. Walter Clary, (apprentice,) by Clapp & Goddard. Water Cask. A fine specimen. *Diploma.*

481. Middlesex Cordage Factory, *North Brighton.* Coils of Rigging and Seizing Stuff, made by James Ackerson. Fair average quality.

308. John G. Smith, *Boston.* Reefing Apparatus.

318. John Miller, *Boston.* Model of Brig, rigged. Showing skill and patience. *Bronze Medal.*

458. Kilby Page, *Boston.* Improved Ship Windlass. This machine imperfectly illustrates a good principle of action, by toggle joint and lever power, easily seen and kept in order. The proportions of this model are so far defective as to give the impression of considerable loss of room above the windlass. This may, on a large scale, be made to appear a false impression.

460. Tucker, Stiles & Co., *Brookline, N. H.* Specimen of Kegs. Neatly made. *Diploma.*

71. Samuel H. Pook, *Charlestown, Mass.* Collection of Steamer and Ship Models, from an Ocean Steamship to Yachts. Exhibiting skill as a naval constructor. *Silver Medal.*

75. Samuel R. Bartlett, *Boston.* Wherry or Dory. Very well made.

169. J. E. Crane, *Lowell.* Cable Stopper, known as *Crane's.* For which a Silver Medal was awarded at the last Exhibition. The present model has some valuable improvements, and is worthy of adoption. For improvements, a *Diploma.*

176. William J. Stetson, *Boston.* Chain Stopper Block. A pretty model, more complicated than others of less cost and greater durability.

246. George W. Robinson & Co., *Boston.* Steering Apparatus for Ships. Well known and generally used, as *Robinson's.* This particular

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machine is a beautifully finished specimen, and exhibits the principle advantageously. This invention is fully equal to any ship-steerer coming within the knowledge and experience of your Committee. It is easily kept clean, and in this respect is superior to some others. It has sufficient power quickly applied. By it the helmsman can hold the rudder when he finds it necessary, and at the same time it will yield when desirable. As this steering apparatus may be considered the first successful one introduced in our day, we consider that it deserves patronage as the mother of several useful inventions of a similar character.

A Gold Medal was awarded to the inventors in 1844, since which some important improvements have been made in the details, making it quite a perfect machine.

271. Edward Pinkham, *Boston.* Specimen of Boat's Sail.

290. Silsby, Mynderse & Co., *Seneca Falls, N. Y.* Bronze Ship Pump. A beautiful piece of work, involving a good principle of action, and deserving of high commendation. *Silver Medal.*

292. A. R. Tewksbury, *Boston.* Model of Steering Apparatus. Wheel applied horizontally to rudder-head. The movement is rapid, but the Committee consider it inferior to several others already noticed.

377. Angus Hoyt, *East Boston.* Division Kegs. An ingenious toy.

431. Elbridge Harris, *Boston.* Steering Apparatus.

453. S. Newcomb, *Boston.* Fancy Yacht Model. Rigged, with sails. A pretty toy; not remarkably good as a model, or for the cut of sails.

504. John Kennedy, *Boston.* Miniature Ship. Howe's rig; bone spars. Well done generally.

181. Samuel Pratt, *Boston.* Patent Screw Spike. An excellent article, but rather costly to be generally used.

233. J. L. Bushee, *New York.* Model of a Yacht. Beautifully executed and cannot fail to go. *Bronze Medal.*

239. Joshua Binney, *Medford.* Ships' Models. Very respectably executed.

1135. William L. Bass, *Cambridgeport, Mass.* Bass's Ship Table. Quite an ingenious and compact affair, being an improvement on one exhibited last year, in this city, and deserving a *Silver Medal.*

822. J. D. Crowell, *Boston.* Specimens of Cast Iron Steering Wheels. Cheap and substantial.

801. George Upton, *Boston.* Model of a Ship. Very fair.

69. H. A. Henderson, *Marblehead.* Fancy Bark. Rather full model, with raking masts. A pretty toy.

133. Mrs. G. E. Russell, *Boston*. Two Models of Lighthouses, by George E. Russell. The Committee do not, in the absence of details, undertake to judge of the mechanical construction and efficiency to stand in exposed situations.

In closing this report, your Committee would congratulate the Association and the public on the marked improvement which has taken place since the last Exhibition, in the completeness of the articles sent to the present Exhibition, and would respectfully suggest to inventors, on future occasions, to attach to their models or machines, in all cases, detailed descriptions, so as to lessen the labor and responsibility of the Judges.

PHILOSOPHICAL AND TELEGRAPHIC APPARATUS.

Thomas Sherwin,
William F. Channing,
Nathan Bishop,
James Slade,
William A. Williams,
A. R. Pope,
Judges.

The electric telegraph has recently become of so much importance, and the instruments connected with it have multiplied so greatly, and are the subjects of such varied invention, that in succeeding Exhibitions they can hardly be classed with propriety among philosophical apparatus, and will probably require a separate department.

No forms of printing telegraph are presented for judgment at this Exhibition, but several of recent invention will undoubtedly be brought forward at subsequent Exhibitions.

30. Palmer & Hall, *Boston*. Three Cases of Telegraphic Apparatus. These instruments comprise a very fine assortment of the machinery belonging to the Morse Telegraph, which is the pioneer of telegraphs, and one of the most universal application. Great ingenuity has been exercised in bringing these instruments to perfection.

The methods of elective telegraphing require great delicacy in apparatus and manipulation to accomplish their results. Improvements, therefore, in the construction of these instruments are to be regarded as contributions to civilization as truly as improvements in the steam engine and printing press.

The Registers of Palmer & Hall present the following improvements :

1st. The "Railroad Register" is covered with a brass cap to protect it from dust, and muffle the sound of the machinery.

2d. The fly is carried by an endless screw, instead of gearing, whereby the noise of the machinery is diminished, which is very important in reading by the sound of the clicks of the magnet.

3d. One equalizing adjusting screw is made to replace two independent screws, for the adjustment of the paper rollers.

4th. In the open " Commercial Register " the ratchet of the barrel carrying the weight is covered from dust.

The telegraph keys are well constructed, and are provided with springs, which can be removed at pleasure, so as to oblige the operator both to lift and depress the key in writing. Their advantage is that the key, by its own weight, closes the circuit, thus relieving the operator of special attention to the switch.

Two relays of very delicate construction, prepared for experiment with the transatlantic submarine elegraph, present the following improvements :

The armature is provided with a bowspring which is supported by itself, relieving the armature from all weight except that of the silk thread connecting the spring, and the armature is also suspended by a spring from above, like a pendulum, so as to avoid the necessity of the wire usually wound around the armature axis to insure good elective conduction.

The pocket relays, with telegraphic key in the same box for testing, also deserve favorable notice.

For all these improvements the Committee recommend a

Gold Medal.

The dry sulphate of copper "Local Battery" exhibited by them is approved, and also electro-magnetic apparatus for medical and academical use.

24. Hinds and Williams, *Boston.* Case of Telegraphic Instruments. The registers and relays are of very fine workmanship and proportions. The magnets especially, which are the source of power, are the best offered for adjudication. The armature of the register is placed nearer the axis than usual, to give power by the increased ratio of attraction of the magnet. The magnet of one of the registers is supported by an arm, at right angles to the upright support, so as to give greater resonance for reading by sound.

The relays are of convenient construction, and of the very best workmanship, and the Committee recommend a *Silver Medal.*

Hinds & Williams also exhibit a small but finely-finished magneto-electrical machine and apparatus for the " Analysis of Shocks."

ELECTROTYPES AND ELECTROTYPE PRINTING.

In this department five cases are exhibited, each of them showing the great progress which has already been made in this art.

10. Moses G. Farmer & Co., *Boston.* One case containing besides other work, three very beautiful specimens in alto-relievo, the first we think ever exhibited in this country. Heretofore it has required much time and labor, with a corresponding expense, to reproduce copies of any article in alto-relievo. Much ingenuity and skill are shown in making the matrices from which the plates are taken, and the method employed renders it practicable to reproduce metallic copies of undercut articles at a very small cost, which have until now required much expense for new moulds at every casting. *Silver Medal.*

20. Beacon Dam Company, *Naugatuck, Conn.* Insulated Telegraph Wire. This wire is covered with bone rubber, in such a manner as to perfectly protect it from water; it is intended for use as a submarine telegraph wire, and being a very valuable improvement upon wires previously in use, the Committee recommend the award of a *Diploma.*

135. Phelps & Dalton, *Boston.* One case of types and electrotypes, exhibiting creditable but not unusual execution.

162. Ives & Pardee, *Mt. Carmel, Ct.* One Hydraulic Ram, with glass receiver, showing the action of the inner valve.

222. Hobart & Robbins, *Boston.* One Case of Electrotypes. Containing specimens far in advance, in execution, of anything before publicly exhibited. The minute and delicate copy of Abbott's Horometer, and Bliss's Circumferentor, deserve especial notice. *Silver Medal.*

274. C. Prince, *Boston.* Allender's Gold Coin Scale, for the detection of American counterfeit coins.

279. Metcalf & Co., *Cambridge.* One Case of Electrotypes, which may be spoken of as that of No. 135.

283. Charles H. Polsey, (a minor), *Roxbury.* Two Gyrascopes, of different sizes. Well made and operating finely. To one of these was attached an electro-magnetic arrangement, by which a continuous motion was produced. A very ingenious and entirely novel construction. *Diploma.*

348. Union Gas Works Company, *Boston.* Rosin Oil Gas Apparatus. As its name indicates, this is designed for the manufacture of gas from rosin oil. It is claimed that dwellings, factories, hotels, small towns, &c., may be furnished with gas, by this apparatus, at much less cost than coal gas. Without expressing any opinion as to its economy, when compared with coal gas, the Committee are of opinion that it may be advantageously erected in

hotels and public buildings in those towns and places where there are not inhabitants enough to make it an object for companies to erect gas works on a large scale. *Bronze Medal.*

385. W. J. Hill, *Boston.* Squares and Scales, graduated on the decimal principle.

405. Erastus Leland, *Sherburne, Mass.* Lyon's Patent Copper Lightning Conductors. This rod consists of doubled and twisted sheet copper, the lengths riveted together and attached by glass insulators to the house.

It is a very prevalent opinion that glass insulators are a great protection. Such, however, is not the case, from the fact that lightning is almost invariably accompanied with rain, and glass when wet is a very good conductor of electricity.

Telegraphic insulators, which are made to insulate electricity of much lower tension than the atmospheric electricity, are so constructed as to protect a portion of glass, or other non-conducting surface, from moisture during a storm. Such insulators might be a slight additional safeguard, if used with lightning rods; but, if the lightning rod is absolutely continuous, is sufficiently large, and makes ample connection with the ground, the Committee believe no danger is to be apprehended from a diversion of the electricity from the rod to the building to which it is attached.

The twisted sheet copper rod presents more surface than the same quantity of metal in a solid rod, but it is less durable and compact. The junction of the strips by rivets does not seem as perfect as brazing or the screwing together of rods would be.

471. G. Tagliabue, *New York.* Thermometers, Barometers, Hydrometers, Hygrometers. Many of these are considered by the Committee as good articles, and worthy of favorable notice, but they exhibit nothing special by way of improvement or invention. *Diploma.*

522. E. S. Ritchie, *Boston.* Air Pumps, and an Electrical Machine. The peculiarities of the pumps are: the exit valve, which is merely a disk of oiled silk, the weight of which alone resists the escape of the air, and which, by its position at the top of the cylinder, admits of easy access; the construction of the dome over the valve and the tube connected with it, so that oil cannot accumulate above the valve, nor escape so as to soil the pump, and so that the valve may be relieved from atmospheric pressure whenever an extraordinary degree of exhaustion is required; the small orifice near the bottom of the cylinder, so that the exhaustion may be continued after the air, by its rarity, has become incapable of raising the piston valve; the capillary tube through which the air passes out of the gauge, without permitting mercury to escape into the pumps; and the position of the stop-cock beneath the pump plate, this cock being placed about the stuffing box, and

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the tube being soldered to the plate, so that there can be no leakage between the plate and the stop-cock. The objects aimed at in these particulars have been partially attained by others; the methods of attaining them used by Mr. Ritchie are considered as new. The Committee regard them as improvements, and yet believe that their practical value must be determined by experience.

The Electrical machines are excellent articles, and exhibit some improvements; as such, we regard the use of felt, instead of leather for the rubber, and the silk netting upon which the amalgam is placed.

The workmanship of the whole apparatus, although it has received no extraordinary attention with a view to exhibition, is very commendable.

Silver Medal.

562. Nathan Richardson. Very Fine Specimens of Printing, from Electrotype Plates. This is the first specimen of *music printing*, by the common letter-press method, from electrotype plates, and is remarkable for the uniform clearness and appearance of the work. *Diploma.*

678. Charles G. King, *Boston.* One Case containing Transits, Compasses, Levels, and other instruments for Engineers' and Surveyors' use. These instruments are generally of very good construction, and the divisions on the Transits, as shown by the two veniers, are very accurate. Mr. King has, at a previous Exhibition, received a Silver Medal for a transit. For the general excellence of the whole case of instruments, the Committee recommend the award of a *Silver Medal.*

697. Robert B. Dwyer, *Boston.* A Round, Neat, Copper Rod, with a single solid pointer above. The method of coupling is not shown, if any is required. It is attached to the house by "*insulators*" also.

757. Gilman Joslin, *Boston.* Globes. Well made and excellent articles sustaining the high reputation which they have hitherto enjoyed. The Solar Telluric globe, for illustrating day and night, the seasons, &c., is a very useful, simple and convenient piece of apparatus. It has received a medal at a previous Exhibition.

764. E. & T. Fairbanks & Co., *St. Johnsbury, Vt.* Two Brass Beams. Two Iron Beams, polished. One Silver Prescription Scale, with glass standard. These are articles of good workmanship.

785. Geo. W. Otis, *Lynn, Mass.* Four Lightning Conductors.

1st. A Solid Iron Rod, with good screw coupled joints, attached to the building by glass insulators. The metal cap covering these insulators is provided with a point which appears to be loosely attached on purpose, whereas to act in connexion with the rod it should be continuous with it. Aside from the insulating arrangement, the rod seems a good one.

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2d. A Twisted Piece of Sheet Copper.

3d. A Rope of Copper Wire, with the ends expanded into a brush.

4th. A Solid Iron Rod, well coupled together, and made to screw directly to the house.

933. O. P. Drake, *Boston.* A Model of a Benzole Gas Machine. This arrangement has decided advantages in the mode of feeding a stream of air to the benzole, and also in the construction of the evaporator, or generator. It was shown at the last Exhibition in a less perfect form, and received a Diploma. *Silver Medal.*

936. Henry Ward Poole, *Pottsville, Penn.* Engineer's Protractor. This is an improvement on the plane table used in surveying. An instrument of this kind, if constructed in a superior manner, can be used to make surveys and plots of ground in an expeditious manner where great accuracy is not required. *Bronze Medal.*

SURGICAL INSTRUMENTS AND DENTAL WORK.

Dr. Henry G. Clark, Dr. George H. Gay,
Dr. George Bartlett, *Judges.*

The Committee have carefully examined all the articles upon their list, and find that they may be divided into two classes: those intended as advertisements simply, and those where there has seemed to be a real effort to present a superior manufacture or a useful improvement. And, as anything calculated to furnish operating surgeons or dentists with greater facilities, or those who have suffered by the operations of either, with improved apparatus, to supply the loss of their limbs or teeth, we have recommended liberal awards for such, and passed over the others by simply naming them in their order.

85. Thomas Lewis, *Boston.* Improved Ball Valve. Domestic Syringes. Very well made, especially the India Rubber Pouches, which are strong, neat, and of good size. We recommend, for excellence in the manufacture, a *Diploma.*

120. Emerson C. Strange, *Taunton, Mass.* Dentist's Lathe. A convenient and well made article.

150. Palmer & Brown, *Fitchburg, Mass.* One Case Dentistry. Porcelain teeth are dentists' materials, not necessarily dentists' work, and like other articles of porcelain ware, are manufactured merely for sale. The

present exhibiters, however, claim to have shown their ability to adapt these materials, in an improved form, to practical use in the mouth, as a substitute for the loss of whole sets of teeth. Their work is the best of the kind submitted to us, and we recommend a *Silver Medal.*

167. Dr. Boardman, *Boston.* Magnetic Case.

170. B. S. Codman & Co., *Boston.* Case of Dental and Surgical Instruments. This contribution consists of a large variety of tools, materials for dentists' use, and for the practice of surgery. The surgical instruments are by George Tieman & Co., of New York, and sustain, by their appearance, the excellent reputation of the manufacturers. There are no better materials for dentists in the Exhibition, more especially in the quality of the gold foil and porcelain teeth.

We recommend to George Tieman & Co., for Surgical Instruments, a *Bronze Medal.*

And to Codman & Co., for quality of tools and materials, a *Silver Medal.*

178. Jones, White & McCurdy, *Boston.* Mineral Teeth and Dental Instruments. These manufacturers received, at the last Exhibition, a Silver Medal for the best teeth made of porcelain. Their present contribution sustains their past reputation.

229. Cummings & Flagg, *Boston.* Dentistry and Toilette Sets. The toilette articles are of good quality, and very neatly and compactly put up. *Diploma.*

293. E. Leach, *Boston.* Dentist's Lathe.

370. S. C. Spooner, *Boston.* Mineral Teeth. Very good.

401. Childs, Shepard & Ridgeway. Dentistry. The contributers in this instance, as in several others, submitted no evidence that the specimens in their case were intended for actual service, rather than for exhibition. Part of the work would seem to be more appropriately assigned to the Committee on Jewelry.

529. Palmer & Co., *Springfield.* Case Artificial Legs. These having already received the Gold Medal of the Association, the Committee recommend no award at the present time. They are very extensively used, and very generally prized by the wearers. If the inventor could obviate the very disagreeable *thump* which the leg almost invariably makes, when in actual use, we should consider it a great desideratum.

553. Kingman & Hassam, *Boston.* Case of Surgical Instruments. A very fine and extensive collection of surgeons' instruments. Some of them are of novel form, and all of them of high finish, and apparently constructed of excellent materials. There are several silver-plated pessaries, of the pat-

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tern approved by Simpson, we understand, of which we simply desire to say, that we should never recommend them to any patients of our own. They are very nicely made, but much more likely to be hurtful than useful.

K. & H. exhibit a new form of Tourniquet, which appears to possess all the qualities to be desired in such an instrument. *Silver Medal.*

619. C. D. Hayward, *Fitchburg, Mass.* Dentist's Materials.

624. John S. Drake, *Boston*, contributed by J. W. Phelps, *Boston.* Artificial Legs, Hands and Arms. The legs are very ingeniously constructed, with a variety of springs, &c., which would seem to fit them for actual and convenient use. We are assured by those who wear them that they are comfortably applied and easily worn. They are remarkably light and substantial.

Mr. Palmer must look to his laurels. The unfortunate users of such things will have the benefit of the efforts and improvements which competition always insures.

The artificial hands and arms invented and constructed by Mr. Drake, are remarkable specimens of ingenuity, applied to supply a loss, that of the hand and arm, undoubtedly greater sometimes than that of a leg. He has succeeded, as far as we can judge by examination of specimens not in actual use, in a manner not approached by any other artificer. We are told, upon good authority, that a person who had the loss of both hands supplied in this way, is able to "hold a pen, write, handle a knife and fork with proper activity, put on and take off a hat, &c., &c." We hope that, at a future time, the inventor may be able, by the exhibition of these arms and hands in actual service, to demonstrate his claims to the highest award of the association.

For Mr. Drake's Artificial Legs, Arms, &c., we recommend a

Silver Medal.

687. Mattson & Co., *Boston.* Family Syringes. This case contains two varieties of injection syringes. One, called "Mattson's," made with a flexible valve at each end of a rubber tube; and another called "Arnott's," on the principle of Maw's English, and Lewis's American, instruments. The form, as well as the situation of the valves, and the care taken in the manufacture of the instruments, entitle "Mattson's," to be reported as the best enemata apparatus known to us.

The little book sold with it is a good compilation, and worth to the purchaser many times what he pays for it.

We recommend for "Mattson's Elastic Valve Syringes," a

Silver Medal.

765. Henry Troemer, *Philadelphia*, by Greenleaf & Brown, *Boston.* Druggists' Scales, Marble Pillars, &c., and Prescription Scales. Apparently well made.

814. Starbuck & Mason, *Boston.* Ancient and Modern (?) Dentistry.

860. J. H. Webber, *Charlestown.* Dentistry.

886. B. S. Codman & Co. Dentists' Grinding and Polishing Lathe.

1464. C. Morse, *Boston.* Case of Inhalers.

1635. George W. Walker, *Lowell, Mass.* Dr. Cutter's Chest Expanding Suspenders and Shoulder Braces. Ladies' Chest Expanding Skirt Suspenders.

1671. S. M. B. Rouse, *Boston.* Medicated Pessaries. Medicated Ointment Pessaries, for the Treatment of Diseases of the Uterus and Vagina. Made for Dr. H. R. Storer, of the Lying-in Hospital, and exhibited by S. M. B. Rouse, Apothecary, 1197 Washington street, Boston.

Indications: To produce a more permanent effect than by any injection; to retain their form at the ordinary temperature and yet be slowly melted by the heat of the body.

1672. Doe, Hazelton & Co., *Boston.* Daniel's Fracture Couch. The best and most compact article for a fracture bed, we have ever seen. Although not very new in principle, or in any one of its parts, yet, as a whole, it combines nearly all the things required in such a bed. With some modifications we could name, we should consider it perfect. They have been in use for several months, for patients of one of the members of the Committee, and we speak, therefore, from personal knowledge. To the inventor, a *Silver Medal.*

1677. Weeks & Potter, *Boston.* Case Nursing Bottles and Nipples.

BOOTS AND SHOES, LEATHER, SHOE TOOLS, AND SHOE MACHINERY.

James Knott,
Daniel C. Baker,
Uriah Manning,
Ebenezer Williams,
James Jones,
Theodore H. Bell,
C. Hale,
Judges.

It gives the Committee pleasure to state, that the articles they were called upon to examine, taken as a whole, are deserving of much commendation. Many of them command our admiration for the superior quality of their materials, the excellence of their workmanship, and their style and beauty of

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finish. The manifest value and usefulness of many of the inventions and improvements, together with the superior skill and ingenuity they evince, render them worthy of special attention. We trust their authors will meet with the high reward they merit.

BOOTS AND SHOES.

32. Farley, Morrison & Co., *Boston*. Specimens of Brogans. Very good work.

105. Thomas E. Mosely & Co., *Boston*. One Case of Gentlemen's Boots and Shoes. One Case of Ladies' Boots and Shoes. Superior work and finish. *Silver Medal.*

115. Israel M. Rice. Boots and Shoes. Excellent work and finish.

131. Robert Knott & Son. Ladies' Boots and Shoes. Superior work. *Silver Medal.*

212. A. Chamberlain, *Abington*. Buffalo Over Shoes. A good article.

297. John F. Pray & Son. Case of Boots and Shoes. Very fine work. *Bronze Medal.*

384. James Howe, *Hopkinton*. Case of Thick Boots. A good article.

419. G. Lamkin, *Boston*. Boots and Shoes. Good article. *Diploma.*

468. Hayward, Burchstead & Neibuhr. Boots and Shoes, pegged. Very good work. *Diploma.*

638. A. Solomon, *Boston*. Case of Ladies' Boots and Shoes. Good work, style and finish. *Diploma.*

644. Daniel Patten, *Boston*. Case of Calf Boots.

694. Boston Rubber Company. Rubber Boots and Shoes. Good article.

835. Gurney & Mears. Case of Pegged Boots and Shoes. Excellent work and finish. *Diploma.*

899. Holbrook & Arnold, *Boston*. Case Boots and Shoes.

1067. S. & E. D. Nash, *Abington*. One Pair of Ladies' Over Shoes. A good article.

LEATHER.

112. R. W. Lincoln & Co., *Hingham*. Specimens of Calf Skins. A fair article.

113. Hall, Merrick & Co., *Boston*. One Dozen Calf Skins. Manufactured by J. Dows & Son, Portland.

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129. B. & J. SHERMAN, *Boston.* Curried Calf Skins. A good article.

270. GRIFFIN, PINGREE & Co. Patent Tanned Calf Skins, with hair on. First rate article. Worthy of notice, as to the tanning. *Diploma.*

321. J. BUSLAND, *Boston.* Calf Skins. Fair article.

325. WYMAN & RUSSELL, *Woburn.* Enamelled Leather. First rate article. *Diploma.*

346. BRIGHAM & GORE, *Boston.* Patent Leather. A very superior article. *Silver Medal.*

358. ATHERTON & STETSON, *Boston.* Enamelled Leather. One Hide, ninety square feet. Good article. *Diploma.*

489. CHARLES PACKER, *Boston.* Shoulders of Calcutta Hides, manufactured in imitation of Goat Skins. A fair article.

597. BENJ. POLAND. Patent Tanned Calf Skins, with the hair on. A good article.

607. MEXAL & BOSS, *Boston.* Calf Skins, finished to imitate the French. A very fine article. *Diploma.*

608. EDSON, DAVIS & Co., *Boston.* Cochineal Roans. A good article.

735. ALFRED LORING, *Hingham.* Specimens of Calf Skins. An excellent article. *Diploma.*

804. W. R. FERNALD & Co. Morocco, Chamois, Alum-dressed and Colored Stock. Good stock.

SHOE MANUFACTURERS' ARTICLES.

53. MARTIN SNOW, *North Bridgewater, Mass.* One Case Boot Heel Shaves.

67. T. B. & J. T. FULLER, *Boston.* Samples of Shoe Ink. Fair article.

235. CRAGIN, PAGE & Co. One Case of Shoe Manufacturer's Tools. Well-finished articles.

251. RICHARD BEECHING, *Boston.* One Case Cork Soles. A very fine article. *Diploma.*

518. L. M. SMITH, *Boston.* Ten Pairs of Lasts. Good articles.

519. J. HUTCHINS, *Boston.* Shoe Lasts. Well-finished article.

530. JOHN JENNINGS, JR. *Natick.* One Case of Shoe Knives. An excellent and well-finished article. *Bronze Medal.*

593. SULLIVAN BLACKING COMPANY, *Boston.* Paste Blacking. Stove Polish, and Leather Preservative. Good articles.

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816. Boston Shoe Binding Company. Leather Cut Shoe Bindings. A new, good article, worthy of notice to shoe manufacturers. *Diploma.*

878. S. H. Baldwin, *Meredith Bridge, N. H.* Specimens of Shoe Pegs. Good article.

881. George W. Parrott, *Lynn.* Shoe Patterns, cut on an improved plan.

1232. Francis Hollis, *Boston.* One Dozen Morocco Varnish. Fair.

1668. Hodge & Bacon, *Boston.* Two Pieces of Washington Duck for Shoes.

SHOE MANUFACTURING MACHINES.

25. A. Bayley & Co., *Amesbury, Mass.* An Improved Pegging and Sewing Jack. A good and useful article. *Diploma.*

83. George Fetter, *Philadelphia.* A Boot Crimping Machine. Very good machine, particularly for fine work. *Diploma.*

89. J. W. Wilder, *Boston.* Sole Cutting Machine. Worthy of notice.

110. William Bray, *Salem.* One Sole Machine.

144. W. W. Wilmott, *Boston.* Boot Crimping Machine. A good machine.

177. J. C. Hobbs. Splitting Knife for Leather. A very good article.

240. E. Pratt, *Salem.* New Improved Leather Splitter.

676. Moses Hunt & Co., *Boston.* Improved Leather Splitter. A good article; has received award at previous Exhibition.

701. American Pegging Machine Company. One Pegging Machine. A very ingenious machine, worthy of the attention of manufacturers. *Silver Medal.*

784. Otis & Hadley, *Lynn.* Sole-cutting machine. Superior machine. *Bronze Medal.*

881. Neal & French, *Lynn.* Sole-cutting Machine. Worthy of notice. *Diploma.*

874. Luther Hill, *Stoneham.* Counter Skiver for Boots and Shoes. A very useful and excellent machine. *Bronze Medal.*

CARRIAGES, HARNESSES, SADDLERY, HOSE, ETC.

T. E. Chickering, E. A. G. Roulstone,
Elisha Smith, Jr. *Judges.*

In presenting our Report, the Committee express their regret that so few articles were offered for their examination, especially in the article of carriages. The carriage builders of this state enjoy a reputation well earned by them, for the superiority of their manufacture, and considering the great improvements made in the various kinds of carriages since the last Exhibition, your Committee were surprised to find no competition in this article. After a careful examination of all the articles intended for our judgment, we submit the annexed report.

34. W. & W. F. Boyd, *Mansfield, Mass.* Two Bridles, with Improved Winkers. Exhibiting a new style of winker, which we consider an improvement on the *blinder* heretofore used, inasmuch as they allow the horse the free use of his eyes, to see every thing about him, except that alone which the winker is intended to hide, viz: the carriage behind him. These winkers answer remarkably well the purposes claimed by the patentee, giving light, air and health to the eye of the horse, and this Committee are of opinion that after a fair trial, owners of horses will confirm ours. We recommend a *Bronze Medal.*

38. Henry Taylor & Co., *Boston.* Specimens of Light and Heavy Carriage Wheels, Spokes and Hubs. All of the above articles are made of excellent stock, and the work very well executed. We recommend a *Bronze Medal.*

39. Joseph S. Reed, *Sudbury St., Boston.* Gentlemen's Riding Saddle. Jockey Saddle. One set Buggy Harness, Woolen and Linen Dresses. The riding saddles are made from good stock, the shape good, and the workmanship first-rate. The harness, well made, a very good article. The horse dresses, very handsome, and excellent in workmanship and design.

In a case were also three very handsomely made saddle cloths, and good specimens of rosettes, circingles and horse brushes. We recommend a *Bronze Medal.*

48. Nahum A. Williams, *Mansfield, Mass.* Model of a Wagon, to exhibit the detachment of the shafts, from the forward axle, in case of accident.

74. John T. Ogden, *Boston.* Model of Carriage Door and Window. A very good invention for a close pannelled coach or carriage, as it enables the carriage door to be made lower than the present style, where the window

falls into the pannel of the door, and it allows the door to be made whole, thereby obviating the necessity of leaving the opening to receive the window, which is apt to receive water between the pannels, causing them to swell. We recommend a *Diploma.*

99. Nye & Foster, *Boston.* Carriage Wheels. Stock of the best quality, and the workmanship very good. We recommend a *Diploma.*

204. W. McWilliams, *Boston.* Improved Horseshoe.

215. Wm. Holmes, *Boston.* One Side Saddle and Harness, in case. Of good shape and well made. Very fine specimens of Stirrups and Bits, one Saddle-tree, one Riding Bridle, with a chifney bit. *Diploma.*

231. S. G. Read & Son, *Worcester.* Four Carriage Wheels. Made from excellent stock, and very good work. *Diploma.*

247. Loring & Graupner, *Boston.* Two frames, Silver Harness Ornaments. Very good specimens of harness ornaments.

336. George Kenny, *Milford, N. H.* Patent Noiseless Carriage Couplings. This patent we recommend to the attention of carriage makers. The principle of it is to prevent the rattle where two pieces of iron come together. These irons are so constructed as to admit of a leather or gutta percha washer between the parts.

357. Nichols & Thomas, *West Newbury.* One Buggy Wagon, styled Chauncey Phæton. The only carriage of the kind on exhibition. The outlines good; the wood work, iron work and trimming all well done, and well put together. *Bronze Medal.*

359. R. E. Field, *Greenfield.* Two light Children's Gigs. Very pretty and well-made carriages, for children's use. *Diploma.*

392. Angler Hame Manufacturing Co., *Patterson, N. J.* Two pair Hames. A very good article for heavy hames.

436. John W. Richardson, *Charlestown.* Specimens of Horseshoes. Very good shape and work.

525. P. Edwards, *Boston.* Child's Carriage. A miniature buggy, well made and of good proportions. *Diploma.*

531. James Boyd & Sons, *Boston.* One Piece Double Riveted Leather Hose. Pure Copper Rivets and Burrs, Lowell size. Four Pieces Leather Hose. Stock of the best quality, and the work well executed. *Bronze Medal.*

569. William H. Buskin, *Watertown.* Team Collar and Collar Block. Block of good shape, and an improvement on the old style of wooden block and stretcher, this being of cast iron. The Collar of good shape and a fair specimen of work.

570. William E. Currier, *Boston.* Specimen Wheel Hubs. One Box Wheel Hubs. A very good article.

594. E. N. Merrill, *Boston.* One Pair of Heavy Elliptic Springs. Very good springs for a heavy carriage.

635. David H. Priest, *Watertown.* One Pair Hames. A fair article for heavy wagon.

705. Alfred C. Garratt, *Roxbury.* Patent Improved Carriage Wheel and Axle Boxes. A valuable invention for cleaning and oiling the axle, without taking off the wheel, easily adapted to all kinds of wheel boxes and axles. Any person having experienced the inconvenience in travelling of having a wheel *set*, from the axle or box becoming dry and heated, will appreciate this manner of supplying the box with oil.
Bronze Medal.

772. Shelton & Cheever, *Boston.* Four pieces Suction Hose. Two pieces Leading Hose. Suction Hose of superior quality. Leading Hose of excellent stock, best workmanship. *Silver Medal.*

773. Shelton & Cheever, *Boston.* One Chaise Harness. Two light Gig Saddles. Chaise Harness, well made, of good stock. Light saddles, handsome and well made, and apparently very durable articles.
Bronze Medal.

806. James Boyd & Sons, *Boston.* One set Double Harness. A very handsome, well made, and durable Carriage Harness, heavily mounted with silver ornaments. The only double harness in the Exhibition. For the good quality of the work and stock; a *Silver Medal.*

830. John Stevenson, *New York*, by J. H. Hathorne, *Boston.* Omnibus. A very attractive object in the Exhibition. The wood work, iron work, trimming and painting, all of superior workmanship.
Silver Medal.

843. Joseph K. Slater, *Boston.* Specimen of Horse Collar. A fair article.

869. Henry E. Brown, *Charlestown.* One pair Wheels. Differing from ordinary wheels in the manner in which the spokes are secured to the felloes. The ends of the spokes are secured in a brass or composition socket, at the end of which is a plate riveted to the rim or felloe. *Diploma.*

891. J. J. Russell, *Portland, Me.* One light Sleigh. Well made.

964. Samuel Stewart, *New York.* Ladies' Side Saddle. Of good workmanship, well calculated to give comfort to the rider from its shape, and worthy of particular notice. *Diploma.*

1388. Addison Gilbert & Co., *Boston.* Specimen of Twine Net. Very good article, for which we award a *Diploma.*

HOUSEHOLD ARTICLES, TABLE CUTLERY, &c.

Francis G. Ballard, Levi Thaxter,
Enoch H. Wakefield, *Judges.*

22. Charles H. Wheeler, *Boston.* Improved Curtain Roller. An improvement over the ordinary method of adjusting curtains. *Diploma.*

24. Samuel Baker, *Portsmouth, N. H.* Model of Washing and Wringing Machine. Your Committee never have seen any washing machine which was of any real utility, and are unable to form any correct judgment of this by a model.

60. William Hall & Co., *Boston.* One Case Locks and House Trimmings. A very fine display of highly finished and excellent workmanship. *Silver Medal.*

62. Hiram Baldwin, *Nashua, N. H.* Clothes Dyer. We think this inferior, both in construction and workmanship, to others now in use.

87. D. Bartlett, *Boston.* Smoothing Irons and Holder.

149. Samuel Harris, *Springfield.* Three Coal Sifting Machines. *Diploma.*

152. A. Bowen, *Shelburne Falls, Mass.* Meat Chopper.

193. J. E. Stimpson, *Boston.* Tin Cups and Lamps.

269. J. R. Marshall, *Boston.* Washbench and Cooking Table.

289. D. N. Dunyack, *Salem.* Fountain Brush.

300. S. F. Brooks. Improved Blind Fastener. Model of Ventilator, and Model of Wash Stand and Shower Bath combined. The Blind Fastener is some improvement over those in general use.

338. Charles McCoy, *Boston.* Linen Polishers.

360. J. J. Adams & Co. Samples of Brushes, for exhibition only.

354. A. S. Jordan, *Boston.* Fly and Mosquito Curtains for Windows and Doors. A very ingenious adaptation of shirred rubber to this purpose. *Diploma.*

365. A. A. Atwood, *Belchertown.* Samples of Sieves. A very superior article of Wire Sieves. *Diploma.*

402. F. B. Brown, *Boston.* Window Spring or Sash Fastener.

446. A. Peterson, *Boston.* Case Tin and Brass Ware. The articles under this entry, consisting of Planished Tin Ware, Japanned Toilet Ware, and Brass Cylinder Heads and Escape Pipes for Locomotives, seemed to us to constitute one of the most beautiful displays in the Exhibition, and to

require at our hands more than a passing notice ; and we feel that too much credit cannot be awarded to Mr. Peterson for his successful attempt in producing articles fully equal to those of foreign manufacture, and for which, but a short time since, we were wholly obliged to rely upon importations. The Planished Tin Ware is very finely finished, and the Japanned Ware is superior to any we have ever seen made in this country, while the Brass work is, we believe, a branch of manufacture entirely confined to Mr. Peterson, in this vicinity, and is of very superior workmanship. The Committee are aware that the articles exhibited have been made only by the very praiseworthy desire, on the part of Mr. Peterson, to endeavor to surpass anything that has been before exhibited in his line, and by large expenditures for machinery, and have taken the liberty to depart, in his favor, from a literal construction of the instructions given them, by recommending the award of a *Gold Medal.*

450. Moses Babcock, *Boston.* One Egg Beater. A very ingenious affair, and if they can be afforded at a low price, will be of great utility. *Diploma.*

451. O. C. Phelps, *Boston.* Improved Patent Water Filter. *Diploma.*

457. James Porter, *Boston.* Willow Basket Work. The articles under this entry, comprising Clothes, Hamper, Market and Laundry Baskets, Chair, &c., were the most beautiful and highly finished specimens of Willow Work ever brought to our notice, and fully deserving of a *Bronze Medal.*

463. Harris & Milk, *Boston.* Spirit Lamp Kettle. The only thing new in this article is in the construction of the Spirit Lamp, which is so arranged as to prevent the heat from causing an overflow of the alcohol, which renders this apparatus more safe for domestic use. For the Lamp, a *Diploma.*

491. Homer & Co., *Boston.* Gilt Window Shades.

515. C. F. Morrill, *Boston.* Smoothing Irons.

516. D. N. B. Coffin, Jr., *Boston.* Water Filter. We had no means of judging of its utility, as it was tightly enclosed under a glass shade.

645. George W. Chipman & Co., *Boston.* Chamberlain's Patent Window Curtain Fixtures, with Arm Bracket. A very cheap and effective arrangement to dispense with the balance tassel. *Diploma.*

546. S. Sawyer, *Fitchburg.* Rattan Brooms. Deck Scrub.

672. T. N. Breed & Co., *Boston.* Family Grindstone. A useful article, well made. *Diploma.*

696. D. W. Bill, *Boston.* Chopping Trays. A very finely-finished and superior article. *Diploma.*

718. John A. Power & Co., *Boston.* Rattan Baskets.

731. Steele & Co., *New York.* Feather Dusters. Very well made, and the best specimens of feather dusters we have ever seen. *Bronze Medal.*

770. R. Warner & Co., *Boston.* Brooms—A Mammoth Broom and Two Half Brooms.

783. Geo. H. Coburn, *Boston.* Three Fountain Lamps.

792. G. W. Coburn, *Malden.* Self-adjusting Ventilator.

808. Marden, Spafford & Co., *Boston.* Painted Wire Window Screen.

846. James W. Edgerly, *Boston.* Window Spring, or Sash Holder.

925. E. Paige & Co., *Boston.* Specimens of American Demijohns. The willow covering of these is most beautiful, and worthy of a *Diploma.*

929. Gray, Brothers, *New York.* Ratchet Bed Key.

1040. A. L. Williston, *Northampton, Mass.* Cloth Stretcher, for writing with Indelible Ink.

1062. Asa Patten, *Roxbury.* Refrigerator. A well-finished article.

1154. B. B. Webster & Co., *Boston.* Patent Window Mosquito Screen. A very ingenious and highly finished article, for protection from flies and mosquitoes; a very great improvement over the old style of mosquito bars, and which can in a moment be detached from the window, and attached again at pleasure. The Committee think it well deserving of a *Bronze Medal.*

1363. Marden, Spofford & Co., *Boston.* Two Gold and Velvet, and one Plain Gold Window Shade.

1457. John Cram & Sons, *Boston.* Clothes Dryers, Ironing Table, &c. The various articles of every day use, to which the invention of Mr. Cram has been applied, and which are not only ingenious but practical, entitle him, in the opinion of your Committee, to a *Bronze Medal.*

1689. John D. Fowle & Co., *Boston.* Venetian Blinds. Wire Screens and Window Shades. The workmanship of the Venetian Blinds and Wire Screens is very excellent, and the Window Shades are entirely superior to any others offered for our inspection. *Bronze Medal.*

CABINET FURNITURE AND UPHOLSTERY.

James Sharp, James H. Beal,
Paran Stevens, *Judges.*

107. John Devey, *South Boston.* Specimen of Japan Painting. It merits a *Diploma.*

114. Isaac Engel, *Boston.* Ten Designs and Machine Cut Mouldings. The patterns are good, and the work clean cut. *Bronze Medal.*

257. C. C. Fiske, *Boston.* Wood Carving. Very good. *Diploma.*

317. Edward Bierstadt, *New Bedford, Mass.* Wood Turning. In good taste and well executed. *Diploma.*

472. Chapman & Hastings, *Boston.* Specimens of Carving. Merit a *Diploma.*

747. Alfred A. Childs & Co., *Boston.* Gilt Portrait Frames. These frames were made in the usual excellent style of these manufacturers. *Diploma.*

748. Ross & Hatchman, *Boston.* Portrait Frames. These were well made, in good taste, and well gilded. *Diploma.*

756. A. C. Barstow, *Providence, R. I.* Burial Caskets. These are of cast iron, and are intended as substitutes for wood coffins. They are well got up, and there are some reasons why this material should be preferred. *Diploma.*

768. Sowle & Ward, *Boston.* Gilt Picture Frames and Bracket. Neat and chaste in design and the work excellent. *Bronze Medal.*

791. Herbert Gleason, *Boston.* Wood Carving. A really good statuette of Franklin, cut in American pine. *Diploma.*

853. Matthias P. Coons, *Wilmington, Del.* Haines's Buckeye Extension Table. An entirely new principle and very ingenious, for boarding-houses and hotels. It has many advantages. *Diploma.*

1015. C. F. Martin. Model of Improved Sofa Bed. As convenient and economical as any sofa bed we have seen. *Diploma.*

1055. Charles Howe, *Dorchester.* Invalid Wheel Chair. Well adapted to its purpose.

1056. C. H. Gould, *Boston.* Patent Excelsior Spring Bed. As a general remark in reference to articles of this description, we would observe that there are in this Exhibition several contributions of spring bottoms for beds, all differing, more or less, one from the other in principle, but all claiming simplicity and durability, each promising comfort in their use and superior facilities for cleanliness. It is not easy to say which of them is to enjoy, ultimately, the public preference, but the Committee finding something to approve in each, award to each a *Diploma.*

1082. Jeffers & Hill, *Boston.* Recumbent Office Chair and Car Seat. Many good qualities. *Bronze Medal.*

1184. D. Brown, *Boston.* Furniture Polish. This has the reputation of being a valuable article.

1200. W. R. Bennett, *Boston.* Inlaid Japan Centre Table. A good specimen of this beautiful japanning. *Diploma.*

1282. M. G. Fosgate, *Boston.* Four Cottage Chairs. Very excellent upholstery work. *Diploma.*

1317. William Blakemore, *Boston.* Set of Chamber Furniture. Black Japan ground, highly ornamented. *Diploma.*

1344. Charles J. Atkinson, *Chelsea.* Screen. The ornamental japanning is very well executed. *Diploma.*

1351. Howe & Co., *Cambridgeport.* Spring Bed and Berth. Very elastic, and not easily deranged. (See remarks at 1056.) *Diploma.*

1356. James G. Blake and A. Eliaers, *Boston.* Sideboard. Rosewood Frame. Step Chair. Swing Crib. Easy Chair. Drapery, &c. The Step Chair and Lounge were favorably mentioned in the report of the last Exhibition, but it is due to Mr. James G. Blake to say that the quality of the contribution he now makes, can only be supplied from one of our most respectable furnishing houses. The Sideboard or Buffet is in the richest and boldest style of design, the carving masterly. For the qualities in this, the Rosewood Glass Frame, the Portfolio Stand, &c., we award a *Silver Medal.*

1364. Tucker's Union Spring Bed Company. Patent Spring Bed. Has some very good qualities. (See remarks at No. 1056.) *Diploma.*

1378. Benjamin Butler, *Boston.* Table Ottoman Frames. As the machine by which these frames are made will be the subject of particular commendation, in the notice of machinery now in Quincy Hall, we award only for the work, a *Diploma.*

1380. Henry Wills, *Boston.* Imitation Marble Top. Is meritorious. *Diploma.*

1384. C. H. Phelps. Patent Leaf Supports. The Committee say of the same model in 1853, it is ingenious.

1391. Phelps & Dimick, *Boston*. Hiawatha Chamber Set. Very tastefully ornamented. The painting throughout this set evidences a high degree of originial taste and artistic talent. *Bronze Medal.*

Spring Bed and Fastening. The remarks on No. 1056 apply also to this; but for some points of excellence we award a *Bronze Medal.*

1397. Lysander Spooner, *Boston*. Patent Wire Spring Bed and Chair. In these the wire is set lengthwise. The inventor claims for them great comfort and cheapness, and that the Bed is of that elasticity and peculiar construction so as to be very luxurious without mattress or feathers, and if so, and there are not objections to its material, it is deserving of much merit. The Chair was found to be very easy, and admirably adapted for a summer chair. *Bronze Medal.*

1401. William H. Nye, *Boston*. Walnut Etarge. Oak Bedstead, and Oak Top Piece, carved. The carving and cabinet work good. *Bronze Medal.*

1418. William Drake, *Boston*. Inlaid Marble Table Top. A beautifully executed work of art. *Bronze Medal.*

1423. Henry B. Ainsworth, *Lawrence, Mass.* Cabinet of Drawers. As specimen of graining very creditable. *Diploma.*

1426. W. O. Haskell, *Boston*. School Furniture. There are some advantages in this plan. *Diploma.*

1433. Miss G. M. Smith, *West Medford*. Painted Table Top. Very neatly painted. *Diploma.*

1447. Rufus Nichols, *Agent*, *Boston*. Model of the "Huntress" Bedstead. A very ingenious combination of the cord, lath and windlass principles. Has many excellent points and few defects. *Bronze Medal.*

1448. J. R. Croston, *Boston*. Blackboard. Good surface for chalk writing. *Diploma.*

1497. G. W. Stevens, *Boston*. Invalid or Study Chair. A very convenient and easy chair, either for the invalid or a person in health. It is simply constructed and well made. *Diploma.*

Lady's Work Table. Very fair.

1500. A. S. Jordan, *Boston*. Furniture Polish. The reputation of this polish is very good, and it is a valuable article for restoring varnished furniture. The Committee award a *Diploma.*

1509. John Putnam, *Boston*. Spring Bedstead. (See remarks at No. 1056.) *Diploma.*

1537. William G. Shattuck, *Boston*. School Furniture. We recollect having examined and commended, at the last Exhibition, a sample of Mr. Shattuck's School Furniture. We now notice evidences of painstaking and improvement, and award a *Bronze Medal.*

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1563. Sewall Pearson, *Boston*. Improved Cabinet Easy Chair. This Cabinet Chair received the Silver Medal and a most flattering commendation from the Committee on Surgical and Medical Apparatus, at the Exhibition of 1853. For subsequent improvements, we award him a *Bronze Medal.*

A Model of Improved Sofa Spring Bed, also by Mr. Pearson, we think ingenious, and deserving a *Diploma.*

1569. American Verd Antique Company, *Roxbury, Vt.* Two Marble Table Tops. Important as a natural production.

1571. Thomas Flaherty, *Boston*. Imitation Marble Table Top. A ready method of closely imitating polished marble. *Diploma.*

1588. A. Boyden & Co., *Boston*. Set of Furniture. This is in black and gold, with fruit and flowers. No expense or labor has been spared; the embellishment is managed skillfully, and the effect is very rich. *Bronze Medal.*

1624. Horace Barnes, *Boston*. Mirror Frames, and Specimens of Carving and Gilding. It is such contributions as this that make these Exhibitions attractive and respectable. The work, especially the white and gold, is well put out of hand. *Silver Medal.*

1629. Z. Lyford, *Lowell*. Portable Stool. Is a compact and convenient article. *Diploma.*

1653. Nathaniel Kingsbury, *Boston*. Miniature Secretary. A neat toy. Very well made.

1658. H. Allen, *Boston*. One Walnut Carved Easy Chair, in satin. Frame and stuffing both good.

1659. Allen & Lincoln, *Boston*. One Carved Walnut Easy Chair, in satin. Soft, easy seat.

1660. C. H. Parsons, *Boston*. Walnut Gothic Chair, in satin. Very good specimen.

1672. Doe, Hazelton & Co. Cabinet Furniture. The present and previous Exhibitions are indebted to this house for liberal contributions of costly articles of furniture, the style and quality of which do so much credit to the taste and skill of our Boston mechanics. As specimens of very best work, we mention a Mahogany Parlor Door, made and polished; A Rosewood Sofa Table, beautifully inlaid; a Centre Table and Card Stand, carved. We think the work in these cannot be exceeded, and we award a *Silver Medal.*

1682. Jean Rance, *Boston*. Mahogany Carved Bibliotheque. The cabinet work very good indeed.

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1685. Mrs. Sarah Sunderland Stewart, *Boston.* Glass Table Top. Oriental painting, so called, and a very rich and well-executed specimen of that process. We award to this lady a *Bronze Medal.*

1697. Miss Eleanor Hovey, *Woburn, Mass.* Oriental Table Top. This, like the preceding, has proved a very attractive contribution. We award also to this lady a *Bronze Medal.*

1691. B. G. Kelley and J. F. Morrison, *Boston.* Spring Bed Bottom. (See No. 1056.) *Diploma.*

1687. T. A. Arms, *Boston.* Gilt Frame and Glass. Very nice work. *Diploma.*

The next twenty numbers we find in the department of Piano Fortes, and in the report we submit we make no reference to them as musical instruments, but only to the qualities of the materials and work done, judging them in these respects as other articles of furniture.

136 and 145. Chickering & Sons, *Boston.* These numbers include nine Grand and six Square Piano Forte Cases. This contribution must be considered a most important one, as conferring character on this Exhibition, and demonstrating that even in the production of articles of high luxury, the resources of our own workshops can supply every demand. In the articles from this establishment, it is evident that no labor or expense is spared to have every part done well. Competent men have directed these designs and their execution, and the materials (we allude to several of the Rosewood Cases, which exceed in beauty any wood we ever saw,) have all been carefully selected. *Silver Medal.*

190. Mason & Hamlin, *Boston.* Two Harmoneum Cases. Very well made.

194. Hallett, Davis & Co., *Boston.* Six Piano Cases. (Two Grand, four Square.) Style and execution of work good throughout. Nothing slighted. *Silver Medal.*

245. Wheeler & Doane, *North Dana, Mass.* Melodeon Legs. Approved.

618. Jacob Chickering, *Boston.* Two Pianos. Well-finished work. For one Enriched Case, *Bronze Medal.*

712. A. Victorine, *Boston.* Designs of Carved Piano Forte Legs. Tasteful patterns.

871. George Hews, *Boston.* Three Piano Cases. Approved.

1269. Francis McOwen, *Boston.* Music Stand. Well constructed.

1414. William P. Emerson, *Boston.* Two Piano Cases. One neat and good. One very rich design throughout. *Silver Medal.*

1503. Miss C. Frothingham, *Boston.* Oriental Light Stand. A very beautiful specimen of work. *Diploma.*

1510. James W. Vose, *Boston.* Three Piano Cases. Neat, round-cornered cases. Stock very beautiful. *Bronze Medal.*

1522. A. Newhall & Co. One Piano Case. For well-made case, a *Diploma.*

1527. Timothy Gilbert & Co., *Boston.* Five Pianos. (One Grand, four Square.) Design, carving, polishing, all good. *Bronze Medal.*

1566. A. T. Holian, *Boston.* One Piano Case. Stained in imitation of Rosewood. Graining excellent. *Bronze Medal.*

1605. Lemuel Gilbert, *Boston.* One Piano Forte Case. Plain, but good.

1630. A. W. Ladd & Co., *Boston.* Six Piano Cases. (One Grand, five Square.) Every part finished. *Bronze Medal.*

1680. Brown & Allen, *Boston.* Three Piano Forte Cases, Rosewood. One of these very good.

1631. S. A. Ladd, *Boston.* Two Melodeon Cases. Very neat and well made.

1690. John A. Hughes, *Boston.* Show Cases. The mouldings well made and exhibiting good workmanship. *Diploma.*

CARPETS, RUGS, AND FLOOR CLOTHS.

George A. Brewer, Royal Southwick,
Henry A. Turner, *Judges.*

The Committee regret to find that less interest has been shown on the part of manufacturers, in the present Exhibition, than in any that have preceded it.

They know not how to account for this apathy, but hope that in future Exhibitions more pains will be taken, on the part of the managers, to secure a more full and perfect exhibition of this important branch of American industry.

1010. A. Folsom, *Dover, N. H.*, by C. C. Littlefield, *Boston.* Three Rolls of 4-4 Painted Floor Cloth. A very fair specimen of this kind of goods, for which the Committee recommend a *Diploma.*

1030. A. & J. Smith, *West Farms, N. Y.*, by Edward C. Stevens, *Boston.* A beautiful specimen of Tapestry Ingrain Carpeting, of lion Figure. As this is a new application of this style of weaving, the Committee recommend an award of a *Silver Medal.*

1053. Hartford Company, *Thompsonville, Conn.*, by E. C. Stevens, *Boston.* A Sample of Three-ply Carpeting, of very good quality.

Mr. Stevens also exhibited one piece of Tapestry Ingrain Carpeting, from the factory of A. & J. Smith, West Farms, of very fair quality.

1402. William P. Tenney & Co., *Boston.* Several beautiful specimens of Power Loom Brussels Floor and Stair Carpets, manufactured by the celebrated Bigelow Carpet Company, Clinton, Mass.

At the Exhibition of this Association, in 1850, a Gold Medal was awarded to the manufacturers of these goods; and in 1853, so great an improvement had been made in them that a further award of a Silver Medal was conferred on them. The Committee are pleased to find that the quality of these goods is well sustained, and recommend an award of a *Silver Medal.*

The thanks of the Committee, and of the Asssociation, are due to Messrs. W. P. Tenney & Co., for this beautiful show of these highly esteemed goods, for, without it, this department of the Exhibition would have been a failure.

1688. John McAlony, *Astoria, N. Y.* Four Pieces Superfine Ingrain Carpeting. Of very fair quality for the grade of goods they are intended to represent. The Committee would recommend an award of a *Diploma.*

PAPER HANGINGS.

Charles Edward Cook,
Charles E. Grant,
Ebenezer H. Hitchings,
G. Homans Marden,
Judges.

While the Committee regret so slight a feeling of competition in this important article of manufacture, they are pleased with the great degree of perfection in those now exhibited.

51. Henry S. Smith, *New Bedford.* Twelve Samples, principally Gilt Patterns. Well-made goods, and similar in style and finish to some of those exhibited by this manufacturer at a former Exhibition.

750. J. F. Bumstead & Co., *Boston.* Seventeen Samples, of all varieties, so closely resembling the best imported article as almost to deceive those of great experience. These manufacturers have displayed great improvement in the velvet and gold papers, and richly deserve, as the Committee unanimously recommend, a *Silver Medal.*

839. Hazelton, Livermore & Woodward. Twenty-three Samples, of a variety of style, and finished in a highly creditable manner, comparing favorably with those of European production. The Committee look upon the patterns presented by these manufacturers as of superior workmanship, and consequently recommend a *Bronze Medal.*

PORCELAIN AND GLASS WARE.

William F. Homer,
Benjamin W. Page,
Otis Norcross,
Judges.

47. Edward G. Odiorne, *Boston.* White Porcelain. Good body and very brilliant. A single piece of plain white exhibited, is as perfect as any piece of china ever seen by your Committee. The Gilding is very firm, and shows quite an improvement in this art. The Knobs manufactured by this Company are very good and of desirable styles. A part of the goods exhibited being of French manufacture, decorated by this Company, did not allow so great a variety of articles as we should have preferred to judge of their success in manufacturing, but we think them entitled to an award of a *Bronze Medal.*

603. United States Pottery Company, *Bennington, Vt.* Earthen Ware. We were much pleased with the Blue Parian Ware, particularly with the Water Jar, which evinces great skill in manufacturing, and is equal, in the judgment of your Committee, to anything of the kind, foreign or domestic. Some specimens of White Iron Stone are of superior quality, and show conclusively that all the materials exist in the United States for making the finest description of these goods.

The Yellow and Rockingham Wares are very creditable, and in style and finish equal to any manufacture in this country. Upon the whole, the goods exhibited show a great advance in the manufacture of Earthen Ware, which is of great importance to the public, and deserves the encouragement of your Association.

We recommend the award of a *Silver Medal.*

876. L. Enck, *Salem, Mass.* Glass Sign. Very neatly done.

879. New England Glass Company, *Boston.* Cut and Plated Glass Ware. The color, designs, finish and delicate quality of the goods exhibited, show great proficiency in manufacturing. We would call especial attention to the Gilding, Silvering, and Plating, which are beautifully executed, supe-

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rior to any ever seen by your Committee. The various styles of fancy articles, are of tasteful shapes. The Medallion Paper Weights deserve particular notice.

The manufactures of this Company, we think, are not surpassed, if equalled by any manufactory in the country; and their new and beautiful designs, and applications of glass to the wants and convenience of the public, deserve an award of a *Silver Medal.*

142. John R. Stearns, *Boston,* for G. & S. Woodroff. Fancy-Glass Ornaments. Most beautiful in style, tastefully executed. Showing great skill in the manufacture of such delicate materials. Award, a *Diploma.*

1295. Charles Mattoni, *Boston.* Specimens of Engraved Glass. Of exquisite finish and taste, equal, if not superior, to any ever seen by your Committee. We recommend an award of a *Bronze Medal.*

1606. C. B. Townsend, *Boston.* Lamp Shades. Not a very serviceable article, and not the most tasteful of its kind.

SILVER AND PLATED WARE, &c.

Jeffrey R. Brackett,
George B. Foster,
Henry Guild,
John Holt,
Judges.

CHRONOMETERS, ASTRONOMICAL AND OTHER CLOCKS, AND WATCHES.

It was with feelings of pride and pleasure that the Committee entered upon this part of their duties. The first exhibition of American manufactured Chronometers and Watches, worthy of note, is a proper occasion for a few remarks upon time-keepers generally, and we submit them with the hope that a rapid glance at the progress made may induce still greater advancement in this art, forming as it does the connecting link between mechanism and science; the clock being, in Edward Everett's elegant language, "that marvellous apparatus which equalizes and divides into nicely-measured parts, a portion of that unconceived infinity of duration, without beginning and without end, in which all existence floats as on a shoreless and bottomless sea." Any invention or improvement which can aid us in the least degree to comprehend more fully the working of the eternal clock, at all times running in the heavens, the beating of which seems to have been recognized by Pythagoras, in his "music of the spheres," and bring our minds in the slightest approach toward the mind of the great Time Maker, "who is the

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same yesterday, to-day and forever," is, perhaps, the highest service that man can perform for his race.

Time is really one of the most every-day affairs imaginable, and, at first, would seem to afford the poorest subject, either for interest or information ; yet the more we think upon it, the more we shall find it to be a matter requiring the deepest research, and involving the most important relations. The division of time into parts, which may easily be distinguished, the one from the other, is of greater consequence than can well be conceived. Without this all history becomes a mere fable ; the time at which any occurrence took place being, next to the locality, the primary subject for investigation. It is, therefore, to the different modes of dividing time, or rather to some mode of doing it, by which the eras and datas may be fixed, that the world is indebted for all its information as to the past, its insight into the present, and its calculations as to the future. Nor less are we indebted for all the conveniences of daily life. Without this, who of us would know the time of our birth, the ages of our friends, or the distances of meetings and separations? Without it, as we have seen, we should be without knowledge of the past, which is the chief source of all knowledge; the arts and sciences would be unknown, (as we shall find that, for many of them, we are indebted to this, their parent, both for their origin and improvement,) and the refinements of civilized life unheard of; property of all kinds would be worthless, as all legal documents for the preservation thereof would be void, priority of possession being the only superior claim to anything of value. Without this, the ocean would be a barrier, instead of a highway for the nations ; nor could the boundaries of countries, or individual territories of any considerable size, be permanently fixed, for seas and mountains may change their names, rocks and rivers their beds, but the uneradicable line drawn by the astronomer knows no variation, more than the Almighty Hand that gave our earth its place in the universe and holds it there.

Looking at the subject, then, from this point of view, it will be curious to trace, from the earliest information we can obtain, up to the present, the ways and means resorted to for the division of time, for immediate use as well as for data of occurrences which it has been deemed advisable to perpetuate. The creation and the Christian era must be the first epochs. About the former of these, there are many differing opinions, varying from each other thousands of years; but the most commonly received is, that it preceded the Christian date about 4000 years. The first division of which, we are informed by the sacred writings, and as we might naturally suppose, was that made by light and darkness, the setting and rising of the sun : "the evening and the morning were the first day." The next apparent change was the waxing and waning of the moon, being the completion of her orbit, and

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was called a month. A certain number of moons brought the returning seasons, each return of which was called a year. A number of these, rather indefinite, certainly, would remove a class of the inhabitants and replace them with another; and this was called a generation. These may be termed the natural divisions of time; and hours, minutes and seconds, the artificial; but even the years, months, and days are artificial, so far as the beginning must be fixed by arbitrary laws. There are, for instance, three kinds of days — the natural, from sunrise to sunset; the astronomical, from noon to noon; and the civil, from midnight to midnight. Each division of chronology requires the assistance of others, whether it be the natural or artificial, the historical or astronomical.

The first subdivision of time, of which Scripture informs us, is that of Isaiah 38 : 8, in which the shadow on the sun-dial of Ahaz is commanded to go back ten degrees. "So the sun returned ten degrees, by which degrees it had gone down;" but this, we must bear in mind, was three or four thousand years after the creation. Homer and Hesiod, who wrote some three hundred years earlier, make no mention of any separation of time, but day and night, seasons and generations. The division of the day into hours was not known to the Romans until after the first Punic war, about 250 years B. C., some three hundred years after Ahaz had his sun-dial in full operation, the Greeks having been indebted to the Egyptians for this advantage. Pliny says, that until the dial erected by Alexander, at Rome, in the 460th year of that city, they only reckoned by day and night. The poet Claudian, who lived at this period, about 300 years B. C., says of the "Old Man of Verona,"

"No change of consuls marks to him the year.
The change of seasons is his calendar,
The cold and heat, summer and winter shows.
Autumn by fruits, and spring by flowers he knows.
He measures time by landmarks, and has found
For the whole day the dial of his ground."

This shows that the dial was known to the poet, and it may have been a matter of taste, not necessity, with the "old man," even as Linnæus, in the eighteenth century, had a floral clock, by the arrangement of plants upon his table, which opening their flowers at a certain time, informed him of the hour with unerring fidelity.

The clepsydras or water clocks were used by the Chaldeans and Indians; they attributed them to Mercury. Vitruvius mentions an Alexandrian artist who, 140 years B. C., combined wheels and springs with the water clock. The clepsydras were known in Britain at the time of the invasion of Julius Cæsar, 60 B. C. Frequent mention is made of the hours of the day by our

Savior. In the year 804, a clepsydra was presented to Charlemagne, by Haroun Al Raschid, from which little balls fell, at the end of each hour, upon a set of bells beneath, after which horsemen closed the doors of the hours and disappeared.

In the time of Alfred the Great, the sun-dial was in common use in England; and some invention of his, appertaining to it, is said to have suggested to Sir Humphrey Davy the safety lamp.

The pendulum was suggested to Galileo by the swinging of the chandelier in the cathedral at Pisa. Huygens soon after invented the maintaining power. George Graham originated the gridiron and the mercurial pendulums. The first pendulum turret clock in Europe, was made and erected by Richard Harris, of London, 1641. Perhaps the most remarkable clock ever made, was that by a clergyman, named Hahn, in the eighteenth century. It was rather a historical orrery, if the expression be allowed. It embraced a period of about ten thousand years, portraying the chief incidents from the creation until after the apocalypse. It was as inexplicable as his creed, and quite as useful.

The first watches were made at Nuremburg, in the seventeeth century, and called Nuremburg eggs. To Dr. Hooke belongs the honor of inventing the hair-spring.

From that time to this, the improvements in both watches and clocks have gone on continuously, and were we not taught by experience that no degree of excellence in anything has yet been attained which may not be surpassed, we might be satisfied with the present mode of computing that, of which we have never enough and yet are ever wasting.

799. Boston Watch Company, Howard & Davis, *Agents*, *Boston*. One Case Watches. One Case Watch Hands. These watches claim to rank as the third, in a scale in which the London first quality stand first, the London second quality and Liverpool first quality second, and the next succeeding qualities the third. They do not claim to correspond with the elaborately finished and chronometrically adjusted watches, now sought for by those who require perfectly accurate instruments, but rather to be a watch for the mass of the people, reliable enough for all the ordinary purposes of life. In some respects, having reference mainly to artistic finish, they as yet fall below the same grade of English watches, while in other and more important particulars, because relating to utility, they are much superior to them. The particulars in which they excel are such as uniformity of end, shake, perfect perpendicularity of the parts, correct depthings, good adjustment of the escapement, fitting of screws, and that substantiality by which, as watchmakers say, "the watch goes together twice alike;" or, in other words, all parts find their place and keep it, and act well together, after being taken

apart, as well as before. Every watchmaker well knows how deficient the better classes even of English watches are in these particulars. The value of these excellences will be understood when it is said that the deficiency of them is what gives the most trouble to the repairer, and both trouble and expense to the owner. It should be remarked that the superiority of the American watches in these respects, results, not mainly, if at all, from superior skill, but from the principles and methods employed in the manufacture, which circumstance affords a guarantee that this superiority will be maintained. Several features in the American watches deserve to be especially noticed. The first is the absence of the fuzee and chain; these parts which were very necessary for equalizing the force in the old verge watch, are continued by the English in the modern lever watch, without any necessity, as can easily be shown, not only by theory, but by abundant proof in the excellent performance of Swiss watches, in which no such parts exist. The fuzee and chain, in connection with the maintaining power, constitute in the English watch an endless source of trouble, and the Committee are of opinion that the American manufacturers have done wisely in dispensing with them. The second feature is such an arrangement of the parts as to lessen the liability of the watch to stop from the presence of foreign substances, and at the same time to facilitate the discovery of any cause of derangement, almost the entire train being fully open to view. The third and grand distinguishing feature is the principle, which was adopted at the outset of the enterprise, of making every watch and every part the duplicate of every other. This plan has been so far adhered to, that every movement will fit every case, and many parts can be transferred from watch to watch without alteration. Any deficiencies in the carrying out of this principle, are, in great part, remedied by a system of registration at the factory. The advantages resulting from this system will be obvious, upon slight reflection, especially in respect to repairing, as in case of a serious damage or total loss of any part, resort can be had to a duplicate, or, on application at the factory, one can be furnished at a trifling cost. Thus, the great difficulty and expense which attends the repairing of other watches is avoided.

The difficulties attending an untried undertaking, like the one entered upon by this Company, cannot be realized but by experience. Your Committee are of the opinion that the enterprise, perseverance and skill exhibited, and the success achieved by it, entitle it to the highest mark of approbation; they therefore recommend a *Gold Medal.*

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CHRONOMETERS.

These being the first Chronometers of New England manufacture ever exhibited, it may not be improper to say a few words upon the distribution of labor in the production, showing what merit does belong, and what does not, to the manufacturer. Under the modern system of division of labor, no manufacturer, either in England or America, now makes any considerable portion of the instrument. For the sake of economy, and in order to ensure greater perfection, the movements, comprising the largest number of pieces of which the chronometer is composed, are made in quantities, in manufactories established for that purpose. From these, of which there are none in America, each chronometer maker receives his movements, advanced in respect to the cost only about one-twentieth part of the value when finished; the other nineteen-twentieths are imparted to it by the labor of the maker. The movement, in the state he receives it, can only be looked upon as raw material, roughly brought into shape, and as but distantly connected with the future instrument, when, as a work of art, it becomes a time-keeper. The manufacturer, or his workmen, then jewel and finish the movement, make the several parts of the escapement, balance, and other additions to complete it, excepting the balance-spring. This, when all the rest is found upon close examination to be perfect, is done by the manufacturer with his own hands. He makes and applies the balance-spring, and effects the adjustment for isochronism and temperature. These being the all-important things in a chronometer, no person can, in any proper sense, be called a manufacturer, who assigns them to other hands than his own. Acting on this principle, the British Admiralty, in conferring prizes, require an affidavit from the claimant, that this springing has been done by himself; and a celebrated Liverpool firm lost a premium, to which they were otherwise entitled, because they could not make the affirmation to that effect.

890. George E. Porter, *Boston*. Three Chronometers.

Silver Medal.

957. William Bond & Sons, *Boston*. Four Chronometers, and parts.

Silver Medal.

Of these last four, one is submitted because of its having a compensating balance constructed on a novel plan, the invention of Mr. Richard F. Bond, one of the firm. The improvement consists in the substitution of a non-magnetic main-bar, for the usual steel one of the balance, which is not liable to induce magnetism, nor to be affected by the changes of temperature.

Another of these four is a Thermometric Chronometer, prepared by them for the accurate determination of mean temperatures in the United States Coast Survey Longitude Expedition of 1855. It is so constructed as to keep mean solar time, at the temperature of 70° Fahrenheit, and to lose daily six second and five-tenths for each degree that the thermometer rises above, and to gain the same for each that it falls below.

In this case there are also some detached portions of chronometers, such as escapements, balance-springs, etc.

The Committee have been assured that, in both instances, these instruments were adjusted by the contributers themselves, and they have no doubt of their finish being all that is necessary for the most desirable performance; but to decide upon the superiority of either, when both seem so nearly perfect, they are entirely incompetent; only an experienced chronometer-maker could do so. Under these circumstances, the parties have kindly withdrawn all competition, (from which neither were disposed to shrink,) and thus enabled the Committee to award to each what they know to be so justly due.

232. Atkins Clock Manufacturing Company, *Bristol, Conn.*, by W. J. Case, *Agent*, *Boston.* Thirty-Day Clocks. These will serve an excellent purpose for offices, schools, and other public buildings, being appropriately cased, without an attempt at show, yet good and substantial; desirable on account of running so long with one winding. Those who have tested them speak highly of them as time-keepers. The principle of the carriage-spring, as a motive power is introduced, with a device for equalizing the force. These are worthy of a *Silver Medal.*

301. A. Bingham, *Boston.* Four Watch Clocks. An ingenious application (for testing the faithfulness of the watchman,) to a cheap but fairly made clock. It is particularly adapted to individual use, for stables, small factories, and other places, where the expense of a better article is to be avoided. *Bronze Medal.*

623. Boston Clock Company, C. Fisher, *Agent.* Mantel and Tower Clocks. Some of these run a year with once winding, and are contrived for showing the positions of the sun, moon, earth, tide and time. For the latter purpose, which alone is of any value, the Committee think them too susceptible to changes of temperature. The application of the centrifugal force to the pendulum is ingenious, though how far successful they had not the opportunity of determining. They would award a *Diploma.*

649. B. Bradley & Co., *Boston.* Clocks and Glass Shades. The Clocks are of ordinary kind. For the Shades, which are well made, both as to form and material, the Committee award a *Bronze Medal.*

660. Howard & Davis, *Boston.* Clocks and Balances. This collection comprises a variety of Clocks. The well-established reputation of the manufacturers is fully sustained by the present Exhibition. One Astronomical Clock is a superior article. The Balances are undoubtedly the best

that can be found. Previous awards at your Exhibitions, for similar articles, prevent any at this time.

707. H. W. Edes, *Boston.* Two Single Impulse Clocks.

1274. Charles H. Lewis, for William Wills, *Newark, N. J.* One Calendar Clock. The Committee deem inventions of this kind as matters of curiosity, rather than utility. Infallibility, alone, gives them any value, and this is not to be expected.

SILVER WARE.

In their comments on this department, the Committee cannot withhold the expression of their surprise, that some of the leading houses in this city have not availed themselves of the opportunity offered by your Association, for the display of their wares, and have shrunk from that honorable competition which induces excellence. The excuses sometimes rendered, that they cannot part with their goods for the short time necessary, or that they are dissatisfied with the awards of some former judges, are unworthy of the spirit expected on such an occasion, and unjust to the government who have selected the arbiters.

The manufacturers, it is understood, are prevented from exhibiting the productions of their ingenuity and skill, by the fear of losing the custom of the shopkeepers, on whose orders they depend; and the apprentice, whose taste and industry prompt him to the judicious use of his extra hours in over work, (not the *wasting* of the midnight oil,) is deterred from entering articles of rare beauty and originality, lest he may offend his employer. How these collateral evils are to be remedied, it is not the duty of your Committee to decide; but they will express the hope and belief that more magnanimity will produce benefits to all parties concerned; and they do this through your Association, feeling that it is your province, especially, to encourage the humblest artisan, and lead the meritorious, but, perhaps, needy apprentice, by the footprints of a Franklin or a Bowditch.

92. Vialle & Carleton, *Boston.* One Case Plated Articles. Work well done. *Diploma.*

141. Bartlett & Potter, *Taunton, Mass.* Jeweller's Polishing Head. A very useful and well-contrived tool. *Diploma.*

183. D. E. & P. O. Eaton, *Boston.* Mechanical Watchman. This is an ingenious arrangement, by which, in case of a door or window being opened, a bell is rung and a lamp lighted. The practical use of it will depend very much upon the skill of the burglar. If it acts promptly, both the disturber and the disturbed will "be brought at once to light."

339. F. K. Sibley, *Auburndale, Mass.* Emery Cloth and Jeweller's Buffs. For these useful tools, and the cloth, admirably adapted to various purposes, the Committee award a *Diploma.*

589. Lyman Haskell, *Boston.* One Case Engraved Silvered Door Plates. These are very good; the lettering worthy of a *Bronze Medal.*

673. Newell Harding & Co., *Boston.* Two Cases of Silver Ware. Some of these articles are above the average finish; the smaller ones are of that degree of excellence which entitles them to especial notice.

Silver Medal.

679. Samuel T. Crosby, and Bigelow Brothers & Kennard, *Boston.* A Service of Silver, known as the "Brewster Testimonial." This is of superior style and finish, and deserving of the high praise it received in the public journals, at the time of its exhibition, after being presented to the Treasurer of the Association. The lettering upon it is admirable. As the joint work of two well-known establishments, it entitles both to great credit for the beautiful manner in which they have carried out the wishes the Association. The Committee recommend to each firm a *Silver Medal.*

682. Henry B. Stanwood & Co., *Boston.* One Case, containing Silver Ware and Jewelry. The same may be said of this, as of the preceding, especially two Water Pitchers; one for the finish, and the other for the design. Among the Jewelry, a Filagree and Emerald Set, also some Diamond Work, are very handsome. *Silver Medal.*

847. Samuel T. Crosby, *Boston.* One Case of Jewelry. Here are some diamonds set in exquisite taste; one stone, of great value, forms a fine pin. The Committee, most of all, admire the manner in which the human hair has been manufactured into brooches, ear-rings, and other articles of ornament and use. The sentiment which originated and continues to improve this branch, is one that never fails to elicit the sympathies of those who have friends at a distance, whether on this side or beyond the shores of time.

Bronze Medal.

GAS FIXTURES, CHANDELIERS, &c.

The display of these articles is very large, and forms one of the chief attractions in the section where they are seen, combining, as they do, beyond most household furniture, indispensable utility with opportunity for rich, varied, and graceful ornament.

In no branch of American manufactures has the improvement been greater, within a few years, than in this. These specimens embrace a great variety of new designs, and the taste shown is highly gratifying to those who desire to patronize home manufactures.

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579. Henry N. Hooper & Co., *Boston.* Gas Fixtures, &c.
Silver Medal.

650 and 651. S. A. Stetson & Co., *Boston,* for W. Carleton, *Boston,* and Mitchell, Bailey & Co., *New York.* Chandeliers, Pendants, &c.
Silver Medal.

681. N. W. Turner, *Boston,* for Cornelius & Baker, *Philadelphia.* Gas Fixtures. *Silver Medal.*

The three lots above, have each their peculiar merit, of designs, coloring, general finish, adaptation, and sometimes a happy combination of all. Under such circumstances, the Committee thought best not to individualize, but give to each what is so well merited by them all.

511. Francis Blake, *Boston.* Specimens of Lamps.

700. E. F. Parker, *Proctersville, Vt.* Two Patent Lanterns. Useful articles.

714. Ufford & Brothers, *Boston.* Patent Lamps. A well-known and popular article.

MANUFACTURED GOODS — SILK, COTTON, AND FLAX.

George W. Warren,	Samuel Batchelder,
David F. McGilvray,	J. C. Converse,
Gilbert Brownell,	Melancthon Smith,

Judges.

It is a matter of surprise and disappointment to your Committee that the *number* of contributers should be so small, in this department of the Exhibition; the more especially, as the quality of the articles exhibited is such as to merit the highest praise, and, from the fact that both Quincy and Faneuil Halls might have been filled with articles in this line, from our own New England, of a character to call forth the greatest admiration, and to astonish those who are unacquainted with the extent and variety of our home manufactures.

505. Charles Williams, *Boston.* Nine Madder Designs, for printing. Very good, but not all of equal merit. The Committee would recommend a
Bronze Medal.

506. Edward Roberts, *Roxbury, Mass.* Twenty-five Specimen Designs, for Dress Goods. A very difficult and useful art, and one not sufficiently considered in this country. The specimens are of a very high order of merit, and are, in the opinion of the Committee, entitled to a *Silver Medal.*

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918. Oliver Eldridge & Co., *Boston.* Eight Manchester Counterpanes, (white and colored.) A great improvement in finish, bleach, and designs, and produced at a price altogether below the cost of any foreign article. The Colored Counterpanes are something new, and very desirable. *Silver Medal.*

1000. Wamsutta Mills, *New Bedford, Mass.*, by Almy, Patterson & Co., *Agents, Boston.* Thirty-one Pieces Bleached Cottons, Jeans and Twills. These were the only Cottons on exhibition, and goods from this mill have already received the Silver Medal from this Association ; but as each kind exhibited still ranks at the head of its class, and as the six pieces Wamsutta Steam Twist are superior to any Cotton manufactured for regular sales in this country, and are a new, desirable, and beautiful article, the Committee unanimously recommend the award of a *Gold Medal.*

1041. Ross & Pearce, *Boston.* Two Cases Silk, Cotton, and Linen Thread, containing several hundred varieties, especially adapted to sewing machines. The samples are highly creditable to the contributers, and the increasing demand for these kinds of threads, makes them worthy of special consideration.

These specimens show conclusively that thread can be manufactured in this country, equal, if not superior, in quality and style, to any of foreign manufacture, and its production should be encouraged. *Silver Medal.*

1113. Anderson & Taylor, for Revere Mills, *Boston.* Two Pieces Cotton.

1177. Moore & Co., *Boston.* Case of Dyed Goods. Handsomely finished, and generally of excellent color, and worthy a *Diploma.*

1239. Hamilton Woollen Company, *Southbridge, Mass.*, by Gardner Brewer & Co., *Agents, Boston* and *New York.* Muslin de Laines and Bareges. Of all the manufactures of New England, this of *Mousselines de Laine* has shown the greatest improvement, and has done the best service in establishing "a reputation and a name" for American manufactures ; and though, at the last Exhibition of the Massachusetts Charitable Mechanic Association, the articles in this line were justly considered "superior to the printing of similar articles imported either from England or France," yet, the improvement since that time has been marked and encouraging, and it has been admitted to a member of this Committee, by some of the best printers of England, that they were taking lessons, in the printing of this article, "from the Yankees."

The great excellence and beauty of other goods of this kind on exhibition, commanded the most careful and impartial attention of the Committee, and, after mature consideration, for their Muslin de Laines, they unanimously recommend the award of a *Gold Medal.*

1362. MESSINGER & BROTHER, *Boston.* Two Cases Manufacturers' Silk.

1410. DAVID RYDER & CO., *Pawtucket, R. I.*, by T. W. Gould, *Agent, Boston.* Specimens of Sewing Cotton.

1429. M. ORMSBEE, *Boston.* Patent Silk Winders. Considered worthy of honorable mention.

1485. LOWELL BLEACHERY AND DYE WORKS, J. Moody, *Agent.* One Case Colored Cambrics. Of exquisite shades of dye, with a leathery wax finish; very desirable, indeed, and not before attained in this country. The great improvement in this article, in both finish and color, in the opinion of the Committee, deserves a *Silver Medal.*

1560. F. S. COX & CO., *Hopedale, Milford, Mass.* American Helix Needles. The samples exhibited, of the different kinds of this necessary article, were equal in finish and quality to any imported; and the Committee are informed that the enterprising proprietors are achieving success, by producing the very best articles in this line, at prices below the cost of the imported article. They would, therefore, award a *Silver Medal.*

1670. PACIFIC MILLS, *Lawrence, Mass.*, Little, Alden & Co., *Agents, Boston* and *New York.* Muslin de Laines, Persians, Challies, Lawns, Organdies and Prints. The beautiful style in which this Company has "got up" their show of the many choice and pretty fabrics exhibited by them, would have done credit to the World's Fair of London, or the Exhibition d'Industrie of Paris. There is not one of the articles exhibited by this Company at *this* time, that would not, at any previous Fair, have been entitled to the Gold Medal. Great praise is certainly due, for the public spirit manifested by this Company, in their display, and it is in keeping with their enterprise and reputation.

For Prints, Challies and Lawns, the Committee unanimously award a *Gold Medal.*

1713. COCHECO COMPANY, Mason & Lawrence, *Agents, Boston.* Cocheco Prints, in great variety. The fame and reputation of these goods have extended beyond the borders of our own country, and the productions of this Company have greatly contributed to give a name and reputation to American Prints. For excellence in single colors, and for novelty in designs, the Committee recommend a *Silver Medal.*

MANUFACTURED WOOL.

Lewis Mills,	Philo Sanford,
Enoch Patterson,	Johnson C. Burrage,
James Tolman,	*Judges.*

The Judges on Woollens regret to see so great falling off in the interest manifested by our woollen manufacturers, in the present Exhibition. The contributers decrease in number, and the goods on exhibition in quantity and variety.

Some few have shown us good specimens of American skill, and all have had our attention, and we speak of them as follows.

1108. Peace Dale Manufacturing Company, *Peace Dale, R. I.*, by E. C. Dyer, *Agent, Boston.* Thirty-nine Gentlemen's Assorted, and Twenty-three Ladies' Long and Square Shawls. Not from fine stock. Fairly made, and a popular article with the trade.

1137. Ballard Vale Company, *Andover, Mass.*, J. P. Bradlee, *Agent, Boston.* Twelve Pieces All-Wool and Two Pieces Silk Warp Flannels. All superior in all respects; fully sustaining the well-known reputation of this Company. We noticed one piece, all-wool, in the finest spinning we have ever seen, being 4-4 wide, weighing two and a half ounces, only, to the yard; one pound of wool producing forty thousand yards of yarn. American wool, only, has been used in these works this season. We advise the bestowal of a *Gold Medal.*

1149. T. E. Taylor, for Ebenezer Society, *Boston.* One Piece All-Wool Flannel.

1176. O. W. Gardiner & Co., *Boston.* Fifty-five Pounds Woollen Yarn, and Forty-three Dozen Gentlemen's and Ladies' Wool Hose. All manufactured by them at their mill in Watertown; well made, and, in our opinion, the next best to any exhibited. *Silver Medal.*

1238. Salisbury Manufacturing Company, *Salisbury, Mass.*, Hall & Fowle, *Agents, Boston.* Seven Pieces Silk Codrington. Six Pieces Mixed Doeskin, and Ten Embossed Table Covers. The Codringtons and Doeskins are decidedly superior, particularly the latter, to anything of the kind on exhibition, confirming the already well-known ability of their new agent, R. W. Robinson, to produce good work. *Gold Medal.*

1253. H. Cooper, *Watertown, Mass.* Specimen of Weaving Yarns.

1288. I. W. Springfield, *Rochester, N. H.*, Parker, Wilder & Co., *Agents, Boston.* Three Pairs 14-4 Cocheco All-Wool Blankets. Decidedly the most perfect article, either of foreign or American make, we have ever seen, and worthy your highest consideration. *Gold Medal.*

1288. Hall & Gibbs, *Bridgeton, Me.*, Parker, Wilder & Co., *Agents, Boston.* Four Pairs 12-4 Cumberland All-Wool Blankets, which, we think, nearly equal, in all respects, except in size, to the "Cocheco," and worthy a *Silver Medal.*

1311. Shorey & Co., *Boston.* Twenty-four Bundles Woollen Yarn.

1321. Bay State Mills, *Lawrence, Mass.*, Lawrence, Stone & Co., *Agents.* Eighty-four Ladies' Shawls, Long, Square, Printed and Embroidered. All well made; many of them of very fine stock and beautiful fabric. The Embroidered Shawls are new to us, and a beautiful article; all, in our judgment, the best in the Fair.

Also, in same invoice — Three Pieces Talma Cloth, for ladies' wear, and One Piece Opera Flannel. Both very perfect, and worthy your consideration. For the Embroidered Shawls, we recommend a *Silver Medal.*

1335. Lawrence, Stone & Co., for Middlesex Mills, *Lowell.* One Piano Cloth. Three Table Cloths.

1350. W. Clapp, *Boston.* Case of Fringes and Dress Trimmings.

1409. Harris & Hutchinson, *Harrisville, N. H.*, by Dutton, Baldwin & Macomber, *Boston.* Four Packages Black Doeskin.

1467. Varnum, Warren & Co., *Boston.* Invoice of Yarns, Hose, &c.

1544. Curtis, Tobey & Sampson. Nine Bundles Woollen Yarn. Of superior quality; but your Committee were unable to learn definitely enough of its history to do more than notice it.

1600. Morse & Coleman, *Boston.* One Hundred and Twenty-five Pounds Woolen Yarn, in some eight or ten different varieties, and Thirty-one Dozen Gentlemen's and Ladies' Hose and Half Hose, in as many different varieties. These goods are principally made at their mills, in Meredith, N. H., Watertown and Roxbury, Mass. They produce some sixty or seventy thousand pounds of yarn, and fifteen to sixteen thousand dozen hose, annually, giving employment to two or three hundred men and women. The yarns are as good as any produced, and we consider the hosiery the best of any shown us, or that we have ever seen, and recommend for it a *Gold Medal.*

1604. Samuel Slater & Sons, *Webster, Mass.*, Almy, Patterson & Co., *Agents, Boston.* Nine Pieces Broad Twilled Beavers and Broad Cloths, in various colors. The Black Cloths and Beavers are very perfect, and it would seem that, but for the disadvantage we labor under in getting the raw material, there would be no need of our paying annually millions of dollars for importing goods of this description. We deem them worthy a *Silver Medal.*

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1604. Waterloo Woollen Company, *Waterloo, New York*. Almy, Patterson & Co., *Agents*. Twenty-nine Gentlemen's All-Wool Shawls, various sizes. Very perfect in fabric, good styles, and the best on exhibition. *Silver Medal.*

1604. Union Manufacturing Company, *Norwalk, Conn.*, by Almy, Patterson & Co., *Agents, Boston*. Twenty-one Pieces, in as many varieties, Woollen Feltings. This is, comparatively, a new fabric, not having been produced in any shape for many years, and, until recently, so imperfectly made, as to render them of doubtful reputation for use and durability. The great improvement in the appearance of those on exhibition, induced your Committee to make some inquiries in regard to the process of manufacturing, extent and capacity of the mill, etc. We learn that these goods are made by the process of felting, as distinguished from weaving. Their peculiar excellence is due to the fact, that the bat, or mass of carded wool of which the cloth is made, is formed of thin sheets, or layers of carded wool, laid alternately, lengthwise and crosswise, so that by the subsequent process of condensing the bat into cloth, the thorough interlacing of the fibres is insured. This process of crossing the fibres of the wool in thin layers, at right angles, seems to be indispensable in making a perfect fabric of felting, rendering it elastic, and of equal strength each way. This method of felting is an American invention, and, we think, deserving the highest encouragement. The Company, we are told, own several letters patent, securing to them this peculiar and valuable process; and manufacture daily, about one thousand yards of these goods, by the employment of only one hundred operatives. We feel that there cannot be too much said in praise of them, and recommend them to your highest consideration. It is proper, also, to state, that none of these goods were made expressly for the Fair. *Gold Medal.*

1638. Charles Stott, *Lowell, Mass.* Invoice of Flannels.

1693. Chace, Wheelwright & Co., for Norway Company, *Rochester, N. H.* One Pair Blankets.

1722. Smith & Balcom, *Proctersville, Vt.* Tucker, Newton & Mills, *Agents, Boston.* One Case (ten pieces) Fancy Mixed Cassimere. These goods were sold, and taken from a jobber's store to the Exhibition, and are a fair specimen of the daily product of the mill. Not from fine wool, but so far as skill in manufacturing, perfection in finish and mixture is concerned, are not excelled by any goods on exhibition. *Silver Medal.*

1729. Boston Hair Cloth Company, J. R. Hall, *Agent, Boston*. Eight Packages Hair Cloth Skirting.

CLOTHING AND FURNISHING GOODS.

Daniel G. Grafton, Samuel H. Newman,
William C. Merriam, Swain Winkley,
Judges.

The Committee on Clothing and Furnishing Goods have examined with great care the various articles submitted to their inspection, and would respectfully report:

423. Joshua W. Thorp, *Hillsboro, N. H.* Tailor's Pressing Machine. May be useful on heavy and medium work. *Diploma.*

1061. Sanford Peatfield, *Ipswich, Mass.* Two Bundles Jacketnett and Bay State Jackets.

1119. J. C. Conkey, *Boston.* Consolidated Transfer System for Tailors. Ingeniously got up.

1142. James Peatfield, *Ipswich, Mass.* Two Bundles Jacketnett and Jackets.

1148. J. C. Draper, *Plymouth, N. H.*, by G. W. Cutter & Co., *Agents*, *Boston.* Case Buck Gloves. Good stock and finish, very creditable to the manufacturer. *Diploma.*

1210. J. T. Read & Co., *Charlestown, Mass.* Specimen of Glove Cleaning. Extremely well done. *Diploma.*

1218. George Lyon & Co., *Boston.* Case of Clothing and Furnishing Goods. Fair specimens of good work.

1222. George W. Leach, *Boston.* Case of Boys' Clothing.

1255. James B. Macomber & Co., *Boston.* Case Shirts. Four Extra Embroidered Shirts. One Ruffle do. Eleven Plain do. Two Night do. They are all extremely well made. One Embroidered Shirt, not done up, is a beautiful specimen of work. *Diploma.*

1300. T. R. Hawley, *Boston.* Case Plymouth Buckskin Gauntlets and Gloves. Good stock, well made. *Diploma.*

1310. Bean & Clayton, *Boston.* One Reversible Coat, of California Beaver. A comfortable article.

1325. Charles E. Tuttle, *Boston.* Two Cases Shirts, &c. Extremely well made, and worthy of a *Diploma.*

1343. Miss Maria C. Coggshall, *New Bedford, Mass.*, by Mrs. A. C. Lord, *Boston.* One Gentleman's Shirt. A specimen of plain sewing.

1366. Mrs. L. A. Wyman, *Boston.* Children's Clothing. A large variety of dresses and articles for children's wear, evincing much skill, ingenuity, and good taste. *Diploma.*

1495. F. B. WALLIS, *Boston.* Case Fine Shirts. All in good taste and beautifully made. *Diploma.*

1538. SOLOMON SIBLEY, *Boston.* Case of Shirts. Beautiful styles and work. One Shirt, not "done up." Workmanship unequalled, and has the bosom so arranged that either buttons or studs may be worn in it, which the Committee think is a decided improvement. *Silver Medal.*

1555. GEORGE N. NICHOLS, *Boston.* Case Dressing Gowns. Breakfast and Smoking Jackets. The whole got up in good taste, very creditable to the contributer. *Bronze Medal.*

1567. JAMES P. DRAPER, *Boston.* Case Shirts, &c. The shirts are beautifully made. The embroidery excels any exhibited. Several pairs of Drawers of improved shape and well made. *Bronze Medal.*

1587. JACOBS & DEAN, *Boston.* Eight Coats. Five Pairs Pants. Seven Vests. One Dressing Gown. These garments are well cut, made of rich material, displaying good taste, and several of them exhibit workmanship highly creditable to the contributers. *Bronze Medal.*

1599. N. D. & A. C. PROCTOR, *Boston.* Fireman's Dress Jacket. Well got up for parade.

1626. M. F. DOLAN, *Boston.* Three Coats. One Dressing Gown. Two Vests. Boy's Jacket and Pants. Three Small Jackets. Two Pairs Pants. Pretty well made, but nothing worthy of commendation.

1627. MRS. S. MANSFIELD, *Boston.* One Boy's Raglan Sack.

1636. E. R. CLEAVELAND, *Boston.* Case Shirts, &c. Specimens of fair work.

1646. C. A. DAMON, *Boston.* Raglan Coat.

1661. KEITH & THORNTON, *Boston.* Case of Clothing — Four Coats; Eight Pairs Pants, and Five Vests. The coats are made in a thorough, workmanlike manner. The pantaloons are all well made; and one white satin vest is a beautiful specimen of workmanship. *Bronze Medal.*

1696. SAMUEL DALE, *Boston.* Case Buck Gloves, Fur Gauntlets, Mittens, &c. Good article. *Diploma..*

HATTERS' GOODS, HATS, CAPS AND FURS.

Dexter Harlow, Thomas C. Bacon,
George T. Coverly, *Judges.*

The Committee notice some improvement on former Exhibitions, in the "set and finish" of mole-skin hats. Except, however, in three instances, they were unable to see such evidence of the skill of the manufacturers, as the present state of the trade warranted them to expect. In general, the hats bear witness to haste and lack of care in their manufacture, doing justice neither to the stock or the abilities of the workman. We are confident, that if the rules and habits of "the Great Bostonian" are remembered, and put in practice by our manufacturers, the labor of future judges in this branch of business, will be more difficult than ours has been. An examination of stock on the shelves of the dealers, will, we believe, show better specimens of work than some we have been called to examine.

The display of Ladies' Furs, is superior in quantity, variety and quality, to that of previous years, and forms not the least attractive portion of the exhibition. The recent improvement in the "dressing" and manufacture of fancy furs; the beauty and value that skill, taste and perseverance have given to articles, which, in their normal state, were comparatively of little worth, is cause for congratulation, not only to the trade, but also to all who are interested in the speedy advancement of labor to its highest development. Contrast between furs exhibited to-day, and those made but a few years ago, will convince the most careless observer, that our manufacturers have not been idle or unobserving.

268. E. T. Miller & Co., *Chelsea, Mass.* Hat Calliper and Band Blocks. The "calliper" appears to us superior to the French "conformateur," because of its greater accuracy, simplicity, and durability.

Silver Medal.

381. Towle & Wentworth, *Boston.* Two Cases Furs and Hats. Gents' Beaver Gloves. Ladies' Fur Gauntlets. A large and varied assortment of Ladies' Furs, among which we noticed Fitch pelerine muff and cuffs, manufactured from selected skins, and in good style. The fur gloves and gauntlets are faithfully manufactured. Some dressed otter skins in this collection are very rich. The mole skin hats exhibited by them are fair specimens.

502. Geo. N. Bigelow, *Boston.* Cases of Hats and Furs. The mole-skin hats, manufactured by R. M. Waters, New York, exhibited by Mr. Bigelow, we consider superior. The "set and curl" are made with most excellent skill and judgment. *Bronze Medal.*

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Mr. Bigelow displayed of his own manufacture, a very handsome assortment of Ladies' Furs, made with care, and in excellent style. An "American sable set" offers evidence, that the manufacturer has a practical knowledge of, and aptitude for, his business. *Bronze Medal.*

510. Oral Dimond, *Boston.* Hat and Bonnet Blocks and Tools. Fair specimens of work.

535. Martin Walko & Co., *Boston.* Fur Carpet. Ladies' Furs. Children's Hats. Ladies' Riding Hats. An assortment of these goods, which occupied considerable space, and attracted attention. The novelty of the "fur carpet," and arrangement of the skins, was its principal recommendation.

1060. W. M. Shute, *Boston.* Two Cases Hats and Furs. In this collection is found the best fitch cape, muff and cuffs in the Exhibition. All the furs are made with neatness and good style. *Diploma.*

The hats are fair specimens of workmanship.

1136. H. K. W. Hibbard, *Boston.* Case Children's Hats and Caps. A fine display. Hats neatly made and trimmed with taste.

1453. Osgood & Harris, *Boston.* Case Children's Hats. This was the best display of this style of goods. Great taste and care have been exercised in trimming the hats, and some specimens for "infants' wear" will cause the young mother to doubt which to choose—the "love of a bonnet," or the hat for "our baby." *Diploma.*

1508. A. N. Cook & Co., *Boston.* Three Cases Hats and Caps. Hats manufactured by Beebe & Co., New York. The best mole-skin hats in the collection. *Silver Medal.*

Cloth Caps and Ladies' Riding Hats exhibited by Messrs. Cook & Co. are worthy of remark, for the combination of beauty of material, with neatness of workmanship.

1554. Ryder, Crocker & Co., *Boston.* Case Hats, Caps and Furs. Not opened for inspection.

1667. Bent & Bush, *Boston.* Furs, Hats, Caps, Military Goods. A large, and rich assortment of Ladies' Furs, which is superior in quality, selection of skins, and elegance of workmanship, to any offered. The manufactures of this house, as exhibited at "the Fair," are eminently worthy of commendation. *Silver Medal.*

B. & B. exhibit Military and Masonic Chapeaux, which claim approbation for skill and taste displayed in their manufacture. *Silver Medal.*

Cloth and Military (cloth) Caps are noticeable, for the quality of material, and thoroughness of the work. Soft Hats, exhibited by the same firm, are distinguished for fineness of stock, beauty of lustre, and superiority of finish.

Their mole hats we do not regard as worthy the reputation of the manufacturers. They likewise offer mole-skin hats on "cloth shells," which have the virtue of being light; but since experience has proved that this is gained by the sacrifice of durability, and as, in our judgment, the substitution of cloth for fur bodies, is a retrogression, rather than improvement, the hats call for no further comments.

UMBRELLAS, COMBS, HAIR WORK AND FANCY ARTICLES.

James H. Weeks, James G. Hovey,
George S. Tolman, Eben E. Dyer,
Judges.

The Committee have examined, as carefully as time would allow, the great variety of articles submitted to their judgment, and if there is any seeming want of care in their decisions, it must be attributed to the fact of having quite too large a number of articles placed upon their list.

They would suggest that, in future Exhibitions, articles strictly fancy, (more especially those made by ladies,) should be given to a committee composed of ladies.

4. Edwin Howard, *Boston.* Small Marble Picture Frame.

79. W. Bowler, *Boston.* Specimen of Papier Mache Work.

109. George S. Bannister, *Boston.* Ornamental Wooden Chair.

192. Taunton Umbrella Company. One Case Umbrellas. A fair, useful article.

201. Mrs. Mary A. Clark, *Charlestown.* Specimen of Hair Work. Worthy of notice, and a *Diploma.*

202. Alexander Wm. Delafolie, *Boston.* Oval Miniature Frame.

278. S. Benari, *Boston.* Case Ivory Carvings. Very good specimens.

306. Gilbert & Jumper, *Boston.* Fly Trap. Warranted to destroy six quarts of flies per day. Ingenious contrivance. *Diploma.*

403. Miss Butler, *Boston.* One Frame, Papier Mache.

407. F. A. Bradford, *Boston.* Case Ivory Turnings. Good specimens and worthy of a *Diploma.*

483. H. Andrews, *Salem.* Wood Vase. One hundred and seven different kinds of wood, executed with a knife.

492. James Pedder, *Roxbury.* One Corner Bracket.

495. James Dandleine, *Boston.* Oval Picture Frame, Louis XIV. style. An elaborate design. *Diploma.*

524. J. R. Shedd, *Billerica.* Frame Work.

571. S. D. Gill, (13 years old,) *Boston.* Miniature Marble Table and Monument. Excellent work for such a youthful artisan.

586. S. C. Jollie, *New York.* Model Transparent Ballot Box.

598. J. W. Butler, *Boston.* Model Monument of Verd Antique.

636. J. B. Starkweather, *Boston.* Bird Cages. A variety of styles, well designed and finished.

652. Samuel Parkman Jones, (A blind boy,) *Boston.* Bead Baskets and Toys. An exhibition of taste and skill that would be creditable to the exhibitor even though he had the best of eyes. *Diploma.*

654. A. M. Whiting, *Boston.* Miniature Steam Engine. Exquisitely finished. *Diploma.*

667. J. A. Preston, (13 years old,) *Boston.* Moss Rose, from nature, in cut glass. Indicating talent in drawing, and worthy of a *Diploma.*

708. F Raymond, *Charlestown.* One Cane.

723. J. L. Bates, *Boston*, for Claflin & Co., *Providence.* Case Shell Combs. The Committee are informed that these samples were not prepared expressly for exhibition, but are such as are habitually manufactured for regular sales. Both in beauty of design, and excellence of finish, they are quite equal to the imported article. *Silver Medal.*

887. Miss S. F. Ellenwood, *Roxbury.* Specimen of Cone Work. Producing a fine effect, and worthy a *Diploma.*

1001. Miss Rebecca C. Lewis, *West Newton.* Specimen of Vegetable Painting, showing the difference between "eyes and no eyes." From the humblest materials, to be had for the gathering, we have here a beautiful picture, worthy of all commendation. *Diploma.*

1002. D. P. Butler, *Boston.* One Improved Phrenological Bust.

1004. E. Canegally, *Boston.* Case Hair Work. Containing a great variety of specimens, well executed and deserving a *Bronze Medal.*

1104. Miss M. A. Archibald, *Boston.* Two Work Vases of Pine Cones.

1005. John A. Riley, *Boston.* Specimen of Fancy Work and Etching. Worthy of a *Diploma.*

1008. William H. Leavitt, *Boston.* Fancy Work Box, inlaid with pearl.

1009. C. H. Nichols, *Boston.* Case of Fancy Work.

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1013. J. Coursimault, *Boston.* Case of Hair Work. A great variety of fancy hair work, mourning pieces, &c., showing taste in arrangement and skill in execution. *Bronze Medal.*

1019. Miss L. Davis, *Cape Elizabeth, Me.* Specimens of Shell Work.

1023. S. Horace Page, *Chelsea.* Specimen of Fancy Work.

1024. H. M. Litchfield, *Boston.* Ornamental Light Stand. Exhibiting great improvement in this department of labor. *Diploma.*

1031. Mrs. C. Flinders, *Boston.* Four Frames Moss Work. One Vase do. do. Fine combination of colors, and admirably executed. *Diploma.*

1043. T. F. Edmands, *Boston.* Case of Card Toys, neatly executed.

1047. Mrs. A. Green, *Boston.* Specimen Fancy Hair Work.

1052. D. Dearborn, *Boston.* Case of Knife Wood Carving, manifesting ingenuity and skill. *Diploma.*

1075. Henry Whyte, *Boston.* Inlaid Wood Work Box.

1078. Francis Rudolph, *Boston.* Fine Specimen of Fancy Hair Work.

1083. Miss M. Crossman, *Boston.* Inlaid Work Box. Highly finished and beautiful, even in comparison with foreign articles of a similar character. *Diploma.*

1085. S. Cunningham, *Boston.* Liquor Case. Mahogany, veneered with rosewood. Highly finished.

1092. Miss S. A. Bryant, *Melrose.* Cottage, made of cones.

1093. George W. Wilson, *Charlestown.* Case of Knife Carvings. Great variety and well executed. *Diploma.*

1094. Miss Abby Parsons, *Gloucester.* Bouquet of Pressed Flowers. Prettily arranged, and colors well preserved. *Diploma.*

1096. Miss M. A. Andrews, *Boston.* House. Fancy work.

1114. Joseph Veazie, *Newton.* Cone Frame.

1130. Miss E. Shepard, *Canton, Mass.* Cone Frame, of Oriental Painting. Beautifully executed. *Diploma.*

1144. Walter K. Vila, *Roxbury.* Two Whale's Teeth, carved with a knife. Etching beautifully executed. *Diploma.*

1153. W. Peterson, *Boston.* Ornamented Flower Stand, made of acorns and pine burrs.

1156. Mrs. S. E. Dawes, *Boston.* Moss Cottage.

1159. Mrs. Ozias Goodwin, *Ballard Vale.* Raised Work Ottoman. Pitch pine cones.

1192. Miss E. Stone, *Chelsea.* Cone Basket.

1193. Miss E. T. Allen, *East Boston.* Frame Hair Work. Tastefully designed and skillfully executed. *Diploma.*

1193. Mrs. E. F. Allen, *East Boston.* Frame Fancy Hair Work. Commendable both in design and execution. *Diploma.*

1199. C. P. Osborne, *East Boston.* Knife Carving.

1200. W. R. Bennett, *Boston.* Table Inlaid Japan Work. One of the best specimens of this description of work. Tasteful in design, and nearly or quite equal to the imported article. *Bronze Medal.*

1204. Miss M. L. Butts, *Charlestown.* Grass Work. Exhibiting both taste and skill. *Diploma.*

1205. Mrs. A. R. Strange, *Boston.* Frame Shell Work.

1206. Mrs. M. S. Chace, *Boston.* Two Shell Work Vases and Tray.

1208. Mrs. M. C. Wheeler, *Cambridge.* Perforated Paper Box.

1212. Miss A. Andrews, *Boston.* Leather Frame.

1230. Edwin Coleman, *Boston.* Inlaid Japan Fire Screen. Beautiful in design and execution, and comparing favorably with the Birmingham wares. *Bronze Medal.*

1236. F. O. Snow, *Roxbury.* Wooden Turtle.

1246. J. S. Watson, *Newton.* Carved Wood Frame. Well executed. *Diploma.*

1258. Mrs. Mary A. Ware, *Stoughton.* Cone Work—Two Baskets.

1259. E. K. Davis, *Charlestown.* Lady's Work Box, tin.

1263. Mrs. Joseph Polechio, *Boston.* Box Hair Work.

1271. Charles Clifford, *Boston.* Japan Light Stand. Very highly finished, and entitled to a *Diploma.*

1275. Mrs. H. B. Marshall, *Boston.* Shell Work Chapel. An elaborate and beautiful design, and well executed. *Diploma.*

1286. P. Hunt, *Boston.* Lot of Common and Fancy Band Boxes. Neatly made.

1293. Miss M. J. Sherman, *Lowell.* Inlaid Light Stand. Well executed, and worthy of a *Diploma.*

1301. Charles Rothe, *Boston.* Case Hair Work. In this case, a Transparent Metallic Wig evinces a great degree of skill, having 21,500 hairs fastened singly, and weighing only a half ounce. *Diploma.*

1303. Mrs. A. Fuller, *Boston.* Shell Work Frame.

1308. Mrs. S. V. Merritt, *Cambridgeport.* One Vase Shell Basket. Graceful in design, and well executed. *Diploma.*

1342. John E. Blakemore, *Boston.* Light Stand—Pearl Painting on Glass.

1352. John H. Taylor, (A lad 12 years of age,) *Boston.* Backgammon Board, made of a Cigar Box.

1361. Miss M. E. Floyd, *Weston.* Glass Painted Light Stand. Tasteful in design, and well executed. *Diploma.*

1405. Miss C. B. Townsend, *Boston.* Shell Work Box. Exhibiting taste and skill. *Diploma.*

1412. E. Nutze, *Boston.* Morocco and Velvet Work. Pocket Books. Portfolios. Jewelry Cases, &c. A great variety of styles, well made and neatly finished. *Bronze Medal.*

1416. John F. Adams, *Boston.* One Bird Cage. Vase with Canopies.

1425. Benjamin B. D. Colley, *Marblehead.* Shell House. Neatly executed. *Diploma.*

1432. Barnard Baer, *Boston.* Inlaid Sewing Table.

1434. Mrs. Thomas P. Smith, *Medford.* Glass Painted Light Stand.

1435. J. Walker, *Boston.* Ornamented Tin Bouquet Pitcher.

1441. Mrs. S. C. Wingate, *Boston.* Frame of Fancy Hair Work, composed of hair of four generations. *Diploma.*

1442. Winslow Fuller, (13 years of age,) *West Newton.* One Cone Basket. Good both in design and execution.

1451. Miss Mary E. Beals, *South Boston.* Specimen of Hair Work.

1452. Mrs. William Beals, *Boston.* Shell Work Box.

1461. Mrs. S. Brown, *Hingham.* Frame of Hair Work.

1468. Miss E. A. Perkins, *Boston.* Cone Work. Frame.

1488. A. Gilbert, *Boston.* Case of Hair Work. Sustaining this manufacturer's well-earned reputation. *Diploma.*

1494. A. R. C. Lombard, *Boston.* Case Wax Work. A great variety of fruits and flowers, truthful to nature, and beautifully executed. *Diploma.*

1501. A. S. Jordan, *Boston.* Case of Shell Combs. For exhibition only. This manufacturer has received high praise and several medals for combs exhibited in former years.

1503. Miss Caroline Frothingham, *Boston.* Oriental Painted Light Stand. Excellent in design and finish. *Diploma.*

1504. Mrs. A. A. Smith, *Boston.* Oriental Painted Light Stand.

1505. Miss F. L. Stockman, *Roxbury.* Moss Work.

1514. Miss C. Gibson, *Boston.* Frame Hair Work.

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1518. Charles E. Robinson, *Charlestown.* Inlaid Box.

1519. S. B. Fish, *Charlestown.* Inlaid Box.

1526. Mrs. E. Groves, *Boston.* Shell Work — Harp.

1536. Mrs. D. S. King, *Boston.* Blue Glass Bead Basket, made with zinc hoops.

1541. Miss C. B. Gardiner, *Boston.* Two Frames Hair Work.

1542. E. Webb, *Boston.* Valise. Umbrella.

1550. Miss Sarah Smith, *Somerville.* Frame Pressed Flowers.

1557. A. Vandenhoff, *Boston.* Paper Hot Air Balloons.

1558. D. A. Gliddon, (a lad of 15 years,) *Boston.* Wooden Chain, carved with a knife. Ingenious and skillful.

1562. Miss Edith Brown, *Boston.* Two Glass Baskets.

1586. Miss Mary E. Alden, (14 years old,) *Waltham.* Frame Hair Work. Pretty design. *Diploma.*

1589. Edwards & Currier, *Boston.* One Cage Birds. In great variety and beautiful plumage.

1590. F. Classan, *Boston.* Vase and Ship. Made with a penknife. Indicating patience and skill.

1645. Mrs. E. J. Ashworth, *Chelsea.* Frame Painting on Velvet.

1648. James Boucher, *Boston.* Shell Work Box.

1673. Mrs. S. A. Gillan, *Charlestown.* Frame Pressed Flowers.

1674. Mrs. L. A. Tower, *Boston.* Glass Case—" Old Folks at Home." A clever conceit, illustrating the popular song.

1704. Benjamin Jones, *Cambridgeport.* Furnished Model House.

1705. Miss Clara Stevens, *Cambridgeport.* Shell Work Box.

1706. Miss M. C. Jones, *Cambridgeport.* Embossed Perforated Paper.

1711. Caleb Wright, *Boston.* Book—Wonders of the Earth and Heavens.

1712. Miss Harriet A. Cutter, (13 years old,) *Charlestown.* Frame of Hair Work. Very creditable to the taste and skill of this youthful contributer.

1712. Miss Anna W. Cutter, *Charlestown.* Oriental Painting. One of the most creditable specimens of this style of painting. *Diploma.*

1717. Miss Mary Dashwood, *Boston.* Basket of Flowers, made from Milk Weed. Pretty in design and combination of colors. Showing what " things of beauty" may be formed from the humblest way side materials. *Diploma.*

1724. Mrs. Mary Hall, *Boston.* Fancy Work, made of Beef Bones.

CHEMICALS, PAINTS, VARNISHES, &c.

Dr. A. A. Hayes, Dr. A. A. Gould,
John H. Blake, William A. Brewer,
Judges.

The list of the articles assigned to the Committee on Chemicals, does not embrace a large number of those products which result from chemical operations altering the physical characters so as to form from constituents present, new bodies. There are, however, many objects of interest and importance, and we notice improvements in many of the subjects deserving of attention. Under the head of Perfumery this Exhibition is rich in specimens of fine quality, which the mere utilitarian might pass as unworthy of note, but which if we look to our own importing lists, have a great increasing importance. If, as has been stated, the consumption of soaps is a measure of the civilization of a people, the consumption of perfumes and cosmetics certainly denotes the superfluous wealth a community can spare. Every lover of his country's interests, will be gratified in considering the advanced state of the arts of soap making, wax, sperm and stearic acid candle manufacture, the manufacture of lard into oil and candles, oil pressing, sugar refining, and other allied arts, now permanently established. In the preparation of Paints a very high degree of perfection has been reached, and the manufacture of pigments, from native materials, renders us independent of other nations. The articles used as Varnishes show a marked improvement; and some adaptations by which white surfaces are protected from change, are worthy of special observation. Wine, as an article of domestic manufacture, is becoming every year a larger product. The grapes of New England are more fragrant than the foreign generally, but deficient in constituent sugar. Commerce supplies the material needed, and the observation and intelligence of those who are engaged in the manufacture will soon enable them to put into our market wines which may compete with the foreign in quality. Among the articles exhibited for the first time are manufactures of Variegated Serpentine, from Vermont. This material has already been chosen for the base of the noble statue of Franklin, and has been wrought into many ornamental forms. Although sometimes called marble, it does not contain any of that mineral, but is a composite rock, in which asbestos and talc are cemented by a hard compact carbonate of magnesia. Perhaps no material can be found which is so appropriate in color and durability for sepulchral monuments and purposes as this beautiful stone.

For the first time we have seen devices exhibited for protecting Checks and Bank Notes from alterations. Other modes have been proposed, and both

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public attention and the inventive genius of our countrymen are excited on this subject.

We have seen much of progress in another direction; that of preparing Medicinal Extracts, which is rendering the practice of making up physicians' prescriptions easier and safer, while to a great extent the harm arising from the importations of defective and spurious drugs will be removed. The ability with which any application of power to useful purposes is made by our countrymen, is seen in the magnificent flouring mills of our cities, which are unequalled by any abroad. On a smaller scale, the practice of reducing Spices and Coffee to powder, is every day extending. This is a great convenience to the consumer, and the neat packages of weighed portions diminish the labor of the retailer. Excellent spices, of all kinds, and roasted and ground coffee, were exhibited. Like other improvements, however, there is a wrong, as well as a right direction, in which they may move; and the abuse of the practice is seen in the *production* of coffee powder, from materials *not* of tropical growth. Rarely does an abuse attain much significance, without aid from the public, and, in the case we are considering, we do not imagine that millers and venders are the principals, but, on the contrary, we have evidence that our respectable wholesale dealers and grinders prepare powders of the pure article of the best quality the markets afford. They are compelled to mix the powder of roasted coffee with the powder of roasted chicory, dandelion, or peas, to suit a public demand for *low priced* coffee. Those who would avoid using such mixtures, have only to learn the wholesale price of the kind of coffee they choose, and add one-fifth the sum to the cost, for loss in roasting and grinding, and the total is the *lowest cost* price of the ground coffee. Any article sold at a lower price is certainly a mixture. Prepared Barley and Corn Starch, as articles of food, are rapidly entering into larger consumption, and the specimens exhibited were very good.

It is highly gratifying to observe the improvements made in most of the articles submitted to the Committee, as compared with those of the last Exhibition. This fact, honorable as it is to the skill and intelligence of our manufacturers, has a higher bearing, as it serves to demonstrate our independence of other countries for the supply alike of necessaries and luxuries.

8. VERD ANTIQUE MARBLE COMPANY, *Roxbury*, *Vt.*, D. McCaine, *Agent*, *Boston*. One Chimney Piece. This specimen is a wrought Mantel and Chimney Piece, from the Serpentine of Roxbury, Vermont. The execution of ornamental work, in this hard and imperishable material, has ever called for much effort, and it is a matter of surprise and gratification that native talent and industry have effected this in a satisfactory manner. In variety of color and general tint, this serpentine resembles the marble called verd antique, but differs from it totally in chemical composition and durability.

The manufacturers deserve approbation for their introduction of so valuable a material into common use, and for the direct and simple application by which the material is polished at so small a cost as to bring it within the means of every one. The Committee award to the Company a *Silver Medal.*

16. George H. Horn, *Boston.* Gas Burners. This burner has a metallic slip, which, when the cock is turned to let the gas on, rises and clears the aperture or jet in the burner. It is ingenious, but the Committee cannot judge how useful it might prove in practice.

40. George H. Ruggles, *Boston.* Sheets of Mica. Fine specimens of this useful material.

42. A. C. Warren, *Waltham, Mass.* Paste Blacking. A good article.

86. Banker & Carpenter, *Boston.* Paints and Varnishes. The marketable articles of respectable dealers. The Committee have evidence that purity and excellence are characteristic of the mixed or dry paints sold by this firm.

211. George Stimpson, Jr., *Boston.* Safety Seal and Vignette Bank Checks. An ingenious and useful device resulting from a careful study of existing practice, and a direct and proper guard for this description of value representative. The Committee award a *Diploma.*

211. George Stimpson, Jr., *Boston.* Unalterable Bank Bill Vignette. A photograph accompanies this specimen, illustrating the want of success attending this mode of copying. The subject is one of vast importance in a commercial community; and in the limited time which could be given to it, the Committee could not satisfy every doubt; but they feel that every inventor should be encouraged to present his plans for public examination, and that they should be subjected to the severest ordeals which science can suggest, in the most liberal spirit. They would show their sense of the necessity and importance of protection, in the hope that at another Exhibition the highest mark of approbation may be justly claimed, by awarding a *Diploma.*

352. Stimson, Valentine & Co., *Boston.* Paints and Varnishes. Porcelain White, Zinc White, prepared with varnish instead of oil. The specimens exhibited included finished surfaces of wood, having the appearance of porcelain. As this covering retains its whiteness, under ordinary exposure, and is easily kept clean, its use is an improvement in decoration worthy of attention.

White Lead and White Zinc ground in oil, and adapted to painting, shown by chemical analysis to be perfectly pure.

A collection embracing many varieties of Varnish. The Committee examined all of these articles with much interest, and have reason to believe that excellence alone is sought for by well-directed effort. They recommend the award of a *Silver Medal.*

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551. William H. Smith, *Chelsea, Mass.* Improved Chandelier. This is so arranged that the flame is made to heat the gas before it passes to the jet.

587. Whittier, Dunbar & Co., *Boston.* Two Cases Brushes. One Case Varnishes. The varnishes were brilliant, and included the compound used with zinc white, for producing the "porcelain" surface, polished specimens being in the collection.

Kegs of Paint and Colors, ground. The pigments here are perfectly combined with the oil, and the compound remains permanent. For excellence in grinding, the Committee recommend a *Silver Medal.*

588. H. O. Whittier & Co., *Boston.* Napoleon Blacking. A very good composition, carefully prepared. *Diploma.*

605. Judson & Co., *Boston.* Specimens of Starch. A fair article.

621. Chester Judson and Isaac Pitman, *Boston.* Patent Lamp, for Burning Rosin Oil. A very good arrangement for burning this oil, with a clear, brilliant flame, without smoke. *Diploma.*

684. A. Roulstone Fox, *Boston.* Writing Ink.

691. Newell, Willard & Co., *Boston.* Newell's Patent Solar Lamp. The efforts which the inventor has made to remove risk of explosion in consuming burning fluid, are well known. For the present application of his patented devices, in the way of protecting the solar form of lamp, and adapting it to this fuel, we think he deserves the award of a *Bronze Medal.*

782. J. L. Douglass, *New York.* Gas Burners.

786. W. W. Upham, for Tremont Oil Company. Rosin Oil Lamps. Not having seen these lamps in operation, the Committee cannot judge of their utility.

818. G. C. Robinson, *Boston.* Bag Ground Rock Salt.

826. Granville Mears, *Boston.* Three Bottles Lard Oil. A nearly colorless and highly transparent oil, showing the care and skill of an experienced manufacturer. *Diploma.*

829. L. H. Haven, *Boston.* Mason's Extra Sperm Oil. Composition unknown.

834. J. C. Fernald & Co., *Boston.* Specimens of Coffee—Davis's Mixed Mocha and Java. A very good article. *Diploma.*

851. Henry Wood & Co., *West Needham, Mass.* Bottles of Colors. Quality very good.

861. George N. Davis & Brother. Rubber Goods — Clothing, Belting, Packing, Hose, Enamelled Cloth, Toys, Pencil Cases, &c. The assortment exhibited by Messrs. Davis & Co. was very large, and comprised,

among the useful articles of this material, many that were exceedingly beautiful. Some of the applications of the hard rubber were very interesting, being made into canes, pencil cases, knife handles, combs, &c. All of the goods were well made, and creditable to the various manufacturers of whom they are the agents. For their attractive and extensive exhibition of these goods, we would award a *Silver Medal.*

862. George P. Cooper, *Agent,* for J. Hoyt, *Providence, R. I.* Toilet Powder. Well prepared.

897. James Folsom, *Boston.* Two Medicine Chests. Very convenient and compact arrangement of the more common medicinal agents, and some instruments. The articles are supplied by a well-known and highly respectable house.

909. E. Paige & Co., *Boston.* Specimens of American Grape Wine. This is the product of the fermentation of the native grape without the addition of any alcoholic spirit. This manufacture is becoming greatly extended in various parts of the country, and the doubt which may have been entertained respecting its success has been dispelled by the energy and intelligence enlisted. The manufacturers of this wine have made themselves acquainted, by personal observation, with the method pursued by the manufacturers abroad, and have made important improvements since the specimens here exhibited, were manufactured. These samples are excellent fruit wines, containing little alcohol, and are therefore more wholesome and desirable than many imported compounds, which owe their popularity to the absence, rather than presence, of all that renders a wine valuable. Deeming the introduction of this manufacture as of great value and importance, the Committee award a

Silver Medal.

926. W. Lincoln & Co., Agents for Rodman, *New Bedford.* Sperm Candles. This favorite article among the many substitutes in use still holds its place. The samples are excellent, and fully sustain the reputation the manufacturer enjoys.

928. J. F. Hall, *Boston.* Wormwood Cordial.

1027. S. M. Metcalf, *Boston.* Indelible Ink and Stencil Plates. This collection contains an improved form of plate, and we find the substitution of written names in any kind of letter for those formerly used. The ink is one of the most permanent compounds known; and for the excellence and general neatness displayed we recommend a *Diploma.*

1059. J. Russell Spalding, *Boston.* Case of Perfumery and Stand. The samples examined by the Committee were foreign extracts, and hair oil of Rosemary and Castor. Excepting the verbena, which was excellent, it was noticed that a slight change had taken place in the samples of extracts.

1086. Richard Coffin, *Haverhill, Mass.* Tooth Powder and Blueing.

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1211. Harrington & Co., *Boston.* Three Boxes Eureka Soap. A composition, apparently, containing an earth, or mineral body, which, at a low price, may be a desirable article.

1131. C. & C. C. Henshaw & Co., *Boston.* Refined Saltpetre. The article was white, in minute crystals, for ready solution in water, and sustained the reputation the manufacturers have acquired by long practice.

1134. J. B. Sparhawk, *Cambridgeport, Mass.* Colored Liquid and Solid India Rubber. The Committee found samples of the milk of the trees, or plants, yielding caoutchouc. The milk has been preserved from decomposition by the use of alkalies, probably.

1150. Woodman & Hill, *Charlestown, Mass.* Six Boxes Soap. A white, hard soap, bearing the marks of skillful manufacture from the best of stock. *Diploma.*

1151. Clark Brewer & Sons, *Boston.* Havana and Principe Cigars.

1155. Thomas Hollis, *Boston.* Box Cologne.

1170. James Dickman, *Boston.* Arnica Court Plaster. A nice article, in different colors, neatly packed. *Diploma.*

1172. Levi L. Thaxter, *Boston.* Case of Chemical Preparations. These are small specimens of pure compounds, neatly enclosed — the work of a pupil in science. As evidence of careful manipulation they deserve commendation. *Diploma.*

1173. A. L. Cutler, *Boston.* Case of Varnishes; with neatly varnished Specimens of Wood, showing the different kinds. They were of good quality, clear, and well preserved, and are deserving of a *Bronze Medal.*

1213. G. T. Barney, *Malden, Mass.* Two Cases Perfumery. The best American manufacture we have seen, and nearly equal to any foreign. For improvement and excellence we recommend a *Silver Medal.*

1226. William O. Pierce, *Boston.* Rosetta Hair Tonic.

1228. Carter, Colcord & Preston, *Boston*, for Tilden & Co., *Lebanon, N. Y.* Medicinal Extracts. Fluid and Solid Medicinal Extracts of Drugs. These are preparations containing the active principles of officinal drugs, freed from gross matters, thereby saving much labor in compounding, and insuring, when proper care is taken, an uniformity and activity not otherwise attainable. We find, on inquiry, that the articles of these manufacturers bear a high reputation for excellence, and we recommend a *Diploma.*

1229. Henry Thayer & Co., *Cambridge, Mass.* Medicinal Extracts. These are the same kind of preparations as 1228, by another manufacturer; and the Committee were pleased to observe, in preparations requiring delicate manipulation, a perfect solution, as indicated by brilliant transparency, and freedom from coloration by heat. An interview with the manufacturer led to a full description of the manufacture and apparatus employed, which evinced the highest skill and ingenuity of invention. We recommend for the articles a *Diploma.*

And for the apparatus and process, a *Silver Medal.*

1243. Speare, Burke & Co. Two Vases of Lard Oil. A very good article. An almost colorless, clear sample of the same. This oil, which is now a very large manufacture, has its value much increased when it is expressed at a low temperature. The Committee had no opportunity to test the different samples exhibited, and consider that, in this case, the reputation of the articles in the market must depend on the care and judgment of the manufacturer.

1244. Lyles, Polhamus & Co., by Speare, Burke & Co. A Vase of Wax Candles. A clear and beautiful article. *Bronze Medal.*

1251. C. R. Geyer, *South Boston.* Cooper's Toothache Remedy.

1265. F. Dana, *Roxbury.* Seven Bottles Wine. A wine made from the expressed juice of the white currant. It retains the grateful aroma of the fruit, and is in a good state of preservation.

1276. James Lee & Co., *Boston.* Linseed Oil, Cake and Meal. Representing a very important manufacture, affecting the interests of all classes in the community. Linseed Oil is one of the articles most freely open to sophistication, and a case in which any substance added causes the largest loss to the consumer. This prevention of fraud is most certainly effected by maintaining, in the great markets, the manufacture of this oil from seed, both foreign and domestic; and the Committee have positive knowledge, that the products of this manufactory are constantly pure and excellent, and recommend a *Silver Medal.*

1292. L. C. Dale, *Boston.* Antiseptic Aromatic Tooth Powder. The inventor communicated to the Committee the composition of this powder, which they approve; and for the invention and good quality, award a *Diploma.*

1299. Carruth & Bachi, *Boston.* Two Vases Linseed Oil. The Committee refer to remarks on 1276.

1301. Charles Rothe, *Boston.* One Case Hair Dye. The specimens presented the usual character of a metallic dye.

1340. Stevens & Milliken, *Boston.* Pyroligneous Acid and Hard Wood Charcoal. Products of the decomposition of wood. An important manufacture; and the good quality of the articles entitles the exhibiter to commendation. *Diploma.*

1369. T. W. Steamburg, *Boston.* Case of Perfumery. The skillful compounding and perfuming of these preparations show experience and judgment in the manufacturer of the articles. The good qualities of these deserve a *Diploma.*

1383. James Gould, *Boston.* Muriate of Lime. Under this name we find a fertilizer, having as its basis salts of lime. Commendatory notices of this compound are before the Committee; and its composition and general action being known to them, they recommend this invention as worthy of approbation. The low price charged for it, places it within the reach of even distant agriculturists; and, as an invention, the Committee recommed a *Bronze Medal.*

1385. Johonnot & Saunders, *Boston.* Tripoli, or Polishing Powder. A native article from Maine; carefully prepared, and adapted to different applications.

1389. E. T. Milliken & Co., *Boston.* Hydraulic-pressed Sperm Candles. Very well made.

1404. C. A. Wood & Co., *Boston.* Cod Liver Oil. The guarantee of purity and efficacy must rest on the knowledge and reputation of the vender.

1431. D. L. Ware, *Boston.* Ware's Lotion.

1450. Samuel Page, *Boston.* Three Bottles Rosin Oil.

1459. J. C. Ayer, *Lowell.* Ayer's Cherry Pectoral and Cathartic Pills. Both have been skillfully prepared, and the former has been favorably noticed at previous Exhibitions.

1460. Isaac Babbitt, *Roxbury.* Six Bottles Rhubarb Wine. The samples show that care and skill insure a substitute for grape wine from a very unpromising source — the leaves of the pie rhubarb. The Committee, gratified by the success attained, recommend the continuance of experiments.

Also, Six Bottles Angelic Soap. A semi-fluid, neutral soap, of high excellence. This preparation sustains the reputation the manufacturer has acquired through pains-taking accuracy, in every application of his knowledge and skill; and in the hope that the market will be supplied with his soap, the Committee recommend a *Diploma.*

1478. A. M. Beck, *Boston.* Case Perfumery, &c.

1490. J. C. Davis & Co., *Cambridgeport.* Three Boxes Soap. Excellent family soap, from a manufacturer of reputation.

1533. Seth Dewing, *Boston.* Crane's Patent Soap.

1549. Nathaniel Cleaves, *Boston.* Harris's Patent Oleometer. A nicely-made, delicate Hydrometer, having a special application to oils of differing densities.

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1556. S. Thomas & Co., *New Bedford.* Two Balls Sperm Candle Wicking.

1561. E. E. Dyer & Co. Cases of Teas, Coffees and Spices. The purity and goodness of these articles depends on the honesty and judgment of the dealers. After their physical character has been modified, in the case of teas by mixing, and in the other cases by grinding to powder, the purchasers, at retail, cannot, without trial, judge. The samples examined by the Committee were excellent, and in this state are doubtless sold by the manufacturers. For nice grinding, a *Diploma.*

1570. T. Dutton Hammond, *Boston.* Case of Perfumery. Hammond's Pomade. Tooth Paste and Jugs of Perfume. These articles are superior preparations. Persian Cream, by James Gordin, is a metallic preparation injurious to the skin. For Hammond's preparation a *Diploma.*

1582. C. L. Jones & Co., *Boston.* Boxes Adamantine Candles and Stearic Acid. Samples illustrating an important manufacture, and presenting the character of pure and excellent articles.

1610. H. H. Howard, *Unadilla, N. Y.* Case Magnetic Soap. A good shaving soap, put up in convenient forms, and deserving commendation and a *Diploma.*

1614. L. & N. Crocker, *Barnstable, Mass.* Specimens of Coarse Salt. Manufactured on our own shores, and composed of large, clean crystals, equal to the best of foreign productions. The Committee commend this specimen to favorable notice, and to encourage extended manufacture would award a *Diploma.*

1620. Geo. C. Goodwin, Agent, *Boston.* Langley's Bitters.

1628. Barnard Glancy, *Boston.* Box Writing Ink.

1634. Stickney & Poor, *Boston.* Manufacturered Mustard, Coffee, Spices, Pepper Sauce, Yeast Powder, Pearl Barley and Split Peas. The Pearl Barley and Split Peas are the only articles retaining so much of natural character as to allow the Committee to judge of them by inspection; and these appear to be excellent. A sample of the roasted peas, so extensively used in manufacturing coffee, is exhibited in this collection. The spices, and, indeed, all the articles, were carefully tested by the Committee, and found to be pure and of very good quality. The mustard, from a peculiarity in manufacturing, is superior, both as a condiment, and as a resort in medical practice. For skillful grinding and superior mustard, the Committee award a *Bronze Medal.*

1649. Stimpson & Co., *Boston.* Nine Bottles Writing and Copying Fluid. Known to the Committee to be of excellent quality; and they recommend an award of a *Diploma.*

1654. J. G. Wilbur, *Boston.* Hair Beautifier.

1655. E. R. Clarke, *Sharon, Mass.* Corn Starch. An excellent article; the basis of several highly palatable and nutritious preparations.

Sherry Wine Bitters. A good tonic, made of well-known roots and barks. *Diploma.*

1666. H. R. Coburn, *Boston.* Glass Jar of Lard Oil. From one of the earliest manufacturers of this oil.

1666. H. R. Coburn, *Boston.* Jar of Tallow Oil. A lubricating oil. This is perfectly neutral in its state, and remarkably clear. It bears reduction in temperature to 32 deg. F., and is the subject of recommendations entitled to respect. The importance of the application calls for the award of a *Bronze Medal.*

1676. J. C. Ayer & Co., *Lowell.* Four Jars Pulverized Medicines. Excellent as specimens of drug-grinding.

1708. E. Towle & Co., *East Boston.* One Box Soap.

1721. Burr, Foster & Co., *Boston.* Hungarian Balm for the Hair.

1727. Joseph Hoyt, *Providence, R. I.* Toilet Powder and Liquid Blueing. Both good articles; the latter very convenient for laundry use.

1728. Boston Linseed Oil Mills, M. Field Fowler, *Agent.* Linseed Oil, Cake and Meal. Referring to observations already made the Committee would add that the samples appear to be good.

1733. William Bogle, *Boston.* Hyperion Fluid. Hair Dye, &c. A handsome show of the articles connected with hair dressing. The fluid preparations have long been in use, and are highly esteemed. In the preparation used for dyeing hair, the injurious ingredients often found are excluded, and the composition has the merit of being efficient and harmless. As an inventor and improver we award a *Bronze Medal.*

FLOUR, STARCH, &c.

Horatio Chickering,
Charles T. Jackson,
Timothy Baker,
Joseph M. Ordway,
Judges.

Your Committee attended to the duty assigned to them, and after making a most careful and conscientious examination of the samples submitted to their inspection, preparing dough from the different lots of flour, testing their strength, fineness, whiteness and sweetness, and having had samples of bread made of the several specimens selected as the best, and tested their quality, would offer the following report:

The origin of the different samples, sent in glass jars, with secret marks and numbers, corresponding to the barrels from which they were drawn, was wholly unknown to the Committee, and their opinions were formed from inspection and full examination only of the samples themselves.

Twenty Samples of Flour were submitted to our judgment.

106. BOSTON CITY MILLS, S. Robinson & Son. Mark G. T. we found to be on flour of very superior quality. It is fine, white, and strong, with great body, and is, in all respects, well manufactured and from excellent material. This flour, the Committee of Judges decide to be No. 1, or the best, and recommend an award of a *Silver Medal.*

558. EARL & WORCESTER, *Boston,* for "Extra Family."

(Q) A very superior sample of flour, very white, and but little inferior in strength to that marked (G. T.) We recommend for this flour, a *Bronze Medal.*

665. SMITH & SHAW, *Boston,* for Livingston Company Mills.

(X) This is an excellent flour for family use. We designate it as No. 3, and recommend the award of a *Diploma.*

238. TUCKER & BROTHER, *St. Louis, Mo.,* "Beacon Street." Contributed by W. & J. B. Libby.

(35) This is a very good flour, but little inferior to (X.) We estimate it as No. 4, and award a *Diploma.*

238. W. & J. B. LIBBY, *Boston.*

(60) "Jerseyville Mills."

262. LEWISTON BAGGING COMPANY, *Maine,* by Marshall French, *Agent, Boston.* Seamless Bags. They are of very superior quality, and for them the Committee recommend the award of a *Diploma.*

421. FOLSOM & BOWKER, *Boston.* Flour and other Bags. Well made, and adapted for the purposes for which they are destined.

528. (62) HARVEY SCUDDER & Co., *Boston,* for "Castle Mills."

574. (32) CLAPP & BROTHERS, *Boston,* for George H. Ely.

(30) CLAPP & BROTHERS, *Boston,* for S. P. Ely.

(12) CLAPP & BROTHERS, *Boston,* for "New Paris."

601. (H) HENRY WOOD & Co., *Boston,* for "Puritan Mills."

699. (E) HICKS & HATHAWAY, *Boston,* for "Bloomfield Mills."

737. (13) S. G. BOWDLEAR & Co., *Boston,* for Lewis Chapin, *Rochester, N. Y.*

738. (FF) S. Chadbourn & Co., *Boston*, for "Codorus Family." The eight samples are all good flour, and the Committee would remark that they found it difficult to decide between some of them and those to which they have recommended premiums.

412. E. Williams & Co., *Boston*, for
(P) "Phillip Garbut."
(54) "City Mills."
(A) "W. H. Hanaford."

596. Chases & Fay, *Boston*. Bags for flour, grain, and other purposes. This firm received a premium at a previous Exhibition, since which they have lost none of their reputation for good bags.

605. Judson & Co., *Boston*. Sample of Flour Starch. It is of good quality.

665. Smith & Shaw, *Boston*.
(LX) "Hamilton Mills."

699. Hicks & Hathaway, *Boston*.
(40) "Aborn Mills."

Clapp & Brothers.
(100) "A. S. Delano."

These are good, extra quality flour.

737. S. G. Bowdlear & Co., *Boston*, for Louis Chapin, "City Mills," *St. Louis*. Wheat Meal, or Graham Flour, of very superior quality. *Diploma.*

862. J. Hoyt, *Providence, R. I.*, by George P. Cooper, *Boston*. Custard Flour. Samples of this were tested by some of the members of your Committee, and it was found to be very delicate and nice. With this lot came also a sample of Muslin Starch, with Blueing of excellent quality, for family use in the laundry. The Committee recommend for the above named samples, an award of a *Diploma.*

1243. Speare, Burke & Co., *Boston*. One Case of Potatoe Starch. It is of good quality, very white and nice, and worthy of a *Diploma.*

1655. E. R. Clarke, *Sharon, Mass.* Corn Starch, for custards, &c. It is a good sample, and is excellent for food. *Diploma.*

BREAD.

Horatio Chickering, James Weld,
Charles T. Jackson, Timothy Baker,
Judges.

The Committee appointed to inspect and judge of the qualities of bread exhibited by the public bakers, have attended to their duty, and beg leave to offer the following report:

Eighteen lots of bread, of many varieties and forms, were entered for premiums, and the Committee were gratified to find them all of good quality, and creditable to the bakers. Some of the samples were of very superior quality, and probably as good bread as can be made.

The Judges were often much perplexed in deciding upon the merits of samples that nearly approached each other, but by keeping separate notes of their opinions, and not comparing them until the inspection was completed, they found that on several lots they perfectly coincided as to their views. Thus, the lot selected as the best was found so marked on all our lists, and we have no doubt as to the correctness of that decision. It was only on the lower estimates that we differed in opinion, and had to re-examine the samples and re-consider our judgment.

941. John E. Kurtz, *Boston.* This lot of bread is very white, sweet, light, well baked, and is made of the best kind of flour. Your Committee regard this lot as No. 1, and the best on exhibition, and would recommend for it the award of a *Gold Medal.*

954. J. Merello, *Boston.* French Rolls and Loaves. All of excellent quality, well raised, but quite sweet and thoroughly baked; but not so white as some of the other samples. We recommend for this lot an award of a *Silver Medal.*

949. James E. Stevenson, *Boston.* Assorted Lot of Bread. It is all of very good quality, sweet, light, well baked, and is made of good flour. The Committee recommend an award for this lot of a *Bronze Medal.*

945. Peter Schell, *Boston.* Bread. Made of very good flour, light, sweet, and well baked. For this the Committee recommend the award of a *Diploma.*

940. George S. Kelt, *Boston.* Family Bread.
942. Joseph M. Ordway, *Boston.* Do.
944. M. F. & J. A. Brigham, *Boston.* Do.
948. Samuel N. Gaut, *Boston.* Do.

956. A. Galeano, *Boston.* Family Bread.

953. G. W. C. Washburn, *Roxbury.* Do.

These are all excellent samples of bread, and the Committee had so much difficulty in selecting the best from among them, on account of their uniform goodness, that they consider each one of them separately entitled to a *Diploma.*

939. J. Chater.

943. Millett & Bean.

947. Jesse Maynard.

950. L. M. Maynard.

951. G. A. Maynard.

952. F. W. Morse.

958. R. L. Flanders, *Roxbury.*

959. J. Read, *Boston.*

These lots are generally of good bread, quite creditable to the bakers.

We would remark that a sample of very superior bread was sent in by the baker of the American House, Mr. Francis Henry, which, had it come from a public baker, we should have considered entitled to a high premium. Your Committee would recommend that there should be bestowed upon him a *Diploma.*

CONFECTIONERY, PRESERVES, &c.

Samuel H. Gibbens, George W. Pearson,
Lawrence Nichols, *Judges.*

The Committee on Confectionery are happy to report on the general excellence of the articles submitted to their examination.

205. H. H. Herrick, *Boston.* A Glass Jar. Also, one of Earthenware, with an "improved air-tight stopper." The Committee are of opinion that the novel mode introduced by this contributer, of excluding air from preserves, will commend itself to housekeepers and others, whose preparations are rather for home consumption than for export; the appendage to the jar rendering it less convenient for packing than other forms. As an improvement of general utility, the new "air-tight stopper" merits for the contributer a *Bronze Medal.*

614. Charles Copeland, *Boston.* Confectionery. This collection embraced a splendid table ornament of sugar, also a highly ornamental

cake, both of which, for beauty of design and workmanship, deserve the highest commendation of the Committee. The specimens of rock candy and cream candy, offered by Mr. Copeland, were very superior, as also his lozenges, crystallized and cordial drops.

For the taste and skill manifested by this contributer, the Committee recommend an award of a *Bronze Medal.*

625. Wells & Provost, *New York*, by Curtis & Cobb, *Boston.* Self-Sealing Cans, of various sizes. These were deemed by the Committee fully equal, it not superior, to any cans designed for the same purpose; and they recommend for contribution No. 625, the award of a *Diploma.*

648. Carleton & Johnson, *Boston.* A Large Assortment of Confections. Their preparation from cocoa, generally known as Chocolate Drops, was particularly choice and palatable. For this collection, the Committee would recommend a *Diploma.*

739. L. Bailey, *Boston.* Self-sealing Cans. These, with their closely fitting covers, seem admirably adapted to the preservation of meats, soups, &c., intended for exportation; but the difficulty with which the cover is removed, renders them less favorably adapted to common household use than some other varieties.

842. Charles F. Heilge. Jars of Cream Candy, Sherbet Fruit, Iceland Moss and Flax Seed Candies. All embraced in this assortment was truly excellent; but the Committee would draw special attention to the two last-named varieties, the manufacture of which is peculiar to Mr. Heilge. The Sherbet Fruit Candy is pleasant and refreshing; and the Iceland Moss and Flax Seed Candy, besides being exceedingly palatable, is considered quite efficacious in cases of bronchial affections.

For his rare and useful preparations, and general skill in the manufacture of candies, the Committee would award to Mr. Heilge, a *Bronze Medal.*

888. Charles Burnham & Co., *Springfield, Mass.* Arthur's Self-sealing Jars and Cans. The form of these is well adapted to the preservation of jellies.

The Committee feel persuaded that the enterprise suggested by the rapidly increasing use of air-tight jars and cans, will soon discard entirely the various cements that have been thought requisite to the sealing process; and they trust, also, that in the manufacture of every portion of vessels designed for vegetable substances, due regard may be had to the dangerous contact of acids.

1081. Thomas S. Fletcher, *West Windsor, Vt.* A Jar of Clarified Maple Sugar. The sugar is white, of fine flavor, and compares favorably with the best qualities of Havana sugar. For this specimen the Committee recommend the award of a *Diploma.*

1407. J. B. Wheeler, *Boston.* Six Cases Fruit Cream Candy.

1546. Boston Sugar Refinery, Thomas Lamb, *Agent.* Specimens of Loaf, Granulated, Powdered, and Crushed Sugars. These sugars are of superior quality, especially the granulated, and exhibit great progress in the enterprise of this corporation. In consideration of the improvement manifested by the Boston Sugar Refinery, the Committee deem them worthy of particular notice, and recommend the award to them of a *Bronze Medal.*

A variety of Cans and Jars, designed for household use, as preservatives of fruit, tomatoes, and other vegetable productions, engaged the attention of this Committee.

The greatly increasing demand for those contrivances which, at a moderate cost, insure for our tables through the year the luxuries heretofore peculiar to a summer repast, renders any improvement in articles so designed, a matter of great interest to the public.

MUSICAL INSTRUMENTS.

Henry K. Oliver,
Otto Dressel,
J. C. D. Parker,
George Minot,
L. P. Homer,
William Reed,
Judges.

The following instruments were offered for examination, in competition for awards:—

Forty-seven Piano Fortes, subdivided as follows:

Nineteen Grands.
Three Semi-Grands.
Two Parlor Grands.
Thirty-three Squares.

Also,

Two "Composing-Desk" Pianos.
Twenty-three Melodeons.
One Chime of Twelve Bells.
One Drum.
Two Violins.
Two Bells, (not of the "chime.")
Seven Flutes, five "common" and two "octave."
Two Clarionetts.

All of which instruments, eighty-eight in number, were carefully examined by the Committee.

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The Piano Fortes were offered by the following manufacturers :

136 and 145. CHICKERING & SONS. Six Grands. Two Semi-Grands. Two Parlor Grands. Six Squares. Two "Composing-Desk" Pianos.

1414. W. P. EMERSON. Two Squares.

194. HALLET, DAVIS & CO. One Grand. One Semi-Grand. Four Squares.

680. JACOB CHICKERING. Two Squares.

680. BROWN & ALLEN. Three Squares.

871. GEORGE HEWS. Three Squares.

1510. JAMES W. VOSE. Three Squares.

1522. A. NEWHALL & CO. One Square.

1527. TIMOTHY GILBERT. One Grand. Four Squares.

1630. A. W. LADD & CO. One Grand. Five Squares.

1605. LEMUEL GILBERT. One Square.

In the department of Piano Fortes, the Committee, uniting into one class, as is obviously correct, the Grands, Semi-Grands, and Parlor Grands, recommend the following awards :

CHICKERING & SONS, for their Grands, Semi-Grands, and Parlor Grands, for most decided and meritorious improvement, and particularizing specially Nos. 17,524, 17,673, and 17,590, a *Gold Medal.*

TIMOTHY GILBERT & CO., for their Grand Piano Forte, No. 6731, a *Silver Medal.*

HALLET, DAVIS & CO., for their Semi-Grand Piano Forte, No. 6895, a *Silver Medal.*

CHICKERING & SONS, for the two best Square Piano Fortes, of Seven Octaves each, No. 17,671 and No. 17,674, the first *Silver Medal.*

JAMES W. VOSE, for his Seven-Octave Square Piano Forte, No. 162, the second *Silver Medal.*

A. W. LADD & CO., for their Seven Octave Square Piano Forte, No. 1630, the first *Bronze Medal.*

T. GILBERT, for his Seven Octave Square Piano Forte, No. 6349, the second *Bronze Medal.*

HALLET, DAVIS & CO., for their Seven Octave Square Piano Forte, No. 6895, the third *Bronze Medal.*

BROWN & ALLEN, for their Seven-and-quarter Octave Square Piano Forte, No. 6581, the first *Diploma.*

GEORGE HEWS, for his Seven Octave Square Piano Forte, No. 1667, the second *Diploma.*

Jacob Chickering, for his Seven Octave Square Piano Forte, No. 938, the third *Diploma.*

William P. Emerson, for his Seven Octave Square Piano Forte, No. 1174, the fourth *Diploma.*

Of the "Composing Desk" Piano Fortes, the Committee speak in terms of commendation, as articles of convenience to the composer, who, after he may have written a musical phrase or passage. may desire to realize its effect upon the ear. They do not, however, intend to say that they are of indispensable use, for the accomplished and talented musician ought to hear all the effects he intends to produce "in his mind's" *ear*, without the aid of any such convenience; and it, moreover, can hardly be possible, in the torrent and rush of his musical ideas, and when "in a fine frenzy rolling," that he should be willing to run the risk of checking them, by stopping to test effects. There would be great danger that, by such delay, his thoughts would be "thrown off the track," and he find it very hard to get them back again. It is said of an ancient Greek warrior, of great bravery, and who had achieved all his deeds of prowess in hand-to-hand encounters, man against man, and foot to foot, that when he first saw the Ballista, a contrivance for killing, by throwing large stones from a distance, against the enemy, he exclaimed, with a deep sigh, "Farewell to all courage." Might not the "mighty masters of song," with equal feeling, say, in view of these "aids to musicians," "Farewell to genius?" The great Haydn once wrote what he called a "Philharmonic Game," * a most ingenious and extraordinary production, so arranged and subdivided that, by means of a figurated table of directions, anybody, whether musician or not, with ears or without, deaf or dumb, or both, can invent, (no, not invent, can string together,) a countless number of melodies, without the mental parturition of a single original idea! With the aid of the "Desk" and the "Game," what might not toddling geniuses hope to achieve in the yet unexplored regions of Apollo's great domains?

Among the Piano Fortes from the manufactory of Chickering & Sons, was one, No. 17,675, having connected with its bridge an apparatus which the inventor, (Mr. A. G. Corliss,) calls the "Swell-mute Attachment," by which the swell effects of Crescendo and Diminuendo are produced, and in Arpeggio passages a really harp-like effect is secured in a pleasing and truthful manner. These results are brought about by a peculiar application which, placed on both sides of the bridge, from the bar to the outer end of the bass strings, compresses and releases the bridge at the will of the player, by means of a system of leverage, resting upon the inside of the bottom of the case, and by a let-back movement of a spiral spring; the whole being under the control of one of the pedals. Of this new feature of a Piano Forte, the Committee speak favorably, because the effects produced seem to them to be legitimate to the instrument, and apparently calculated to enlarge its capabilities, and widely differ from those appliances which, within a few years, have attempted to reduce the Piano Forte to the illegitimate condition of an unhappy hybrid between a stringed and a wind instrument. The Committee awarded for it a *Diploma.*

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* Printed in Boston, in 1834, by Comer & Ostinelli.

The Committee, in coming to a decision upon the merits of the several instruments of which they have just determined their award, were of entire unanimity. They did not hesitate for a moment in deciding that the Grand Piano Fortes, from the justly celebrated house of Messrs. Chickering & Sons, were not only altogether manifestly superior to all competitors at the present Exhibition, but were an equally manifest and greatly advanced improvement over the well-commended productions of the same establisment, offered at anterior Exhibitions. And the Committee not only feel it to be a pleasure, but an obvious duty, to congratulate the present heads of this long-established house, that they have so well sustained its high repute. The memory of the good name, and of the good deeds, and of the great skill of its founder, shall long be cherished; and it is matter of equal satisfaction and pride, that the garment of praise he so fairly won and wore, has fallen upon shoulders worthy to receive and able to honor it.

To determine which of the two (No. 17,524 and No. 17,673) is the superior instrument, is somewhat difficult. One is more clear and brilliant; the other has more depth and body of tone. One is more distinguished in its power of action, and the other in its elasticity and delicacy of touch. They are both of unsurpassed excellence, and the owner of either may rejoice in his purchase.

The Grand Piano Forte of Messrs. T. Gilbert & Co., No. 6731, is a very good instrument indeed, and highly creditable to the manufacturers. There was some slight defect in the certainty of response to the finger, in rapid repetition upon the same key, resulting, probably, from inaccuracy in the adjustment of the leverage. The tone was very clear and satisfactory. There were no other Grand Piano Fortes from other factories, worthy of special mention.

The Semi-grands of Chickering & Sons, and a Parlor Grand by the same firm, were superb instruments; and this last, had the several varieties of Grands, Semi-grands, and Parlor Grands been kept distinct in class, would have been justly entitled to a highest award, both for its own intrinsic merit, and as a new and meritorious invention. But all these were united into one class, and the award was made accordingly. The Parlor Grand first emanated from the house of Chickering & Sons, and made its appearance at the Exhibition of 1853, and the Committee of that year awarded to it a Gold Medal; but, inasmuch as the late lamented head of the firm was a member of the then Government of the Society, the award could not be confirmed consistently with the laws of the Association. It would afford the Committee great satisfaction could this award be now confirmed.

The Semi-grand of Messrs. Hallett & Davis, No. 6895, is an instrument of merit, and far better than their Grand, which last is inferior to that presented by the same firm in 1853.

That the judgment of the Committee may be distinctly understood, they now repeat their awards on the class of instruments under discussion. They put the several varieties into one class, and they award to Chickering & Sons the first premium, to cover the three varieties offered by them, a *Gold Medal.*

To T. Gilbert & Co., the second premium, a *Silver Medal.*

To Hallet & Davis, the third premium, a *Bronze Medal.*

Before leaving the subject of Grand Piano Fortes, the Committee desire to say that, in their judgment, while very much, nay, wonderfully much, has been achieved by the American manufacturer, in the production of so desirable a class of instruments, there is yet a great task to be accomplished by them, and that is, to make these instruments of such price as will bring them within the reach of purchasers whose means are limited, and who are therefore compelled to content themselves with the ordinary square instrument, which is, after all, not the genuine reality of the Piano Forte, but only a convenient, (or as some decide, a poor,) substitute for the original and true article, the Grand. The prices charged operate as a prohibitory tariff, to many a family and many a student, at his first start. The fact that Grands have been imported from Germany into the United States, at prices from twenty-five to thirty-three per cent. lower than our ruling rates for the same class, seems to indicate that something in the way of reduced price might be accomplished with us. One direction which might most happily be attempted by us, and which is peculiarly the direction that good taste suggests, is to avoid all meretricious ornaments in the case. The gewgaws of pearl keys, (a positive nuisance,) elaborately carved legs and trimmings, tawdry and tinselled bedeckings about the front boards and other parts of the instruments, should at once and forever be abandoned. A sensible and prudent man will never pick out a partner for life for the tawdry rigging of her personal dress, nor will a sensible and true musician select an instrument for its gay ornaments and dazzling appendages of pearl and paint. Pearls and paint may, in either case, be but adroit adornment of charlatanism, to dazzle the eye and cheat the heart. Pearl keys may please an ill-disciplined taste; but compared with ivory, the whiteness of which contrasts so well against the

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ebony, they disappoint a refined taste, and they are positively and extremely unpleasant to sensitive fingers.

In the class of Square Piano Fortes, the awards of the Committee were made with equal unanimity. The instruments of Chickering & Sons are at the head, and next to them comes that of J. M. Vose, No. 162, of seven octaves. Its tone is musical and noble; the high treble notes are particularly fine, and the action is satisfactory. It has one fault, in a certain, though slight, deficiency of resonance from the blow of the hammer, produced by a looseness of the upper coat of hammer felt. This may have been caused by the temperature of the room, which, being always crowded, was always hot, and the air close and vitiated; though too many manufacturers fail in drawing the felt sufficiently close over the hammer-head.

It is not necessary to discuss the merits of the other Square Piano Fortes in detail. Those to which awards have been assigned are placed in the order of their merit, as adjudged by the Committee, and those of which special mention is not made, are passed by as not coming up to a just standard of excellence.

Before leaving this class of instruments, the Committee would refer to a model of Piano Forte action, exhibited to them by Mr. D. H. Shirley, of which the Committee can only say, that, while in the model it operated well and appeared effective and to possess obvious advantages in securing rapidity of reply to all rapidity of finger-action, it did not produce in the Piano Forte which contained the action, the expected result. The inventor explained this want of success to be caused by some want of accuracy in the position of the fulcrum. It would be more just to the inventors of similiar improvements to refer them to a committee of practical Piano Forte makers, than to a committee of musicians; and, to a similar committee should be referred specimens of Piano Forte legs, music stools, canterburys, *et id omne genus*, — "all that sort of thing." One may reasonably be a good judge of tonal effects, and an indifferent judge of furniture. *Bronze Medal.*

Your Committee next proceeded to examine the Reed Organs, represented by a variety or instruments, called by the manufacturers, Melodeons, Organ Melodeons, Model Melodeons, Organ Harmoneums, &c., amounting to twenty-three in number, and exhibited by the firms of

Mason & Hamlin, *Boston.*

T. S. & H. W. Smith, *Boston.*

Nichols & Gerrish, *Boston.*

S. A. Ladd, *Boston.*

And one Tremolo attachment, exhibited by the inventor, is attached to one of Mason & Hamlin's Melodeons, by

L. Louis, *Boston.*

As the Committee of the Association are well aware, the amount of capital invested in the manufacture, and the extent of trade in these instruments has, within a few past years, reached such a magnitude, that, whatever may be the individual judgment of musicians, as to their proper rank among other musical instruments, the propriety of encouraging, by every proper means, the efforts of the different makers to improve them, and, above all, whatever tends to do away with the harshness of tone which, from the mode of obtaining it, has hitherto seemed to be inseparable from reed instruments, should be met with the utmost encouragement and favor.

In this respect, your Committee are happy in being able to report a great and manifest advance upon the results of former Exhibitions. Not only does there seem to be a spirit of invention, and a determination to extend the capacity of these instruments, among the various exhibiters, but the superior workmanship of some of them, and the smoothness of tone obtained by the great pains evidently taken in "voicing" the reeds, give proof of great skill in their department, and argues well for the future excellence of this much-decried kind of instruments. One instrument, in particular, from the establishment of Mason & Hamlin, of Boston, stands out so pre-eminently amongst all on exhibition, that a more detailed description is here given, as well to inform the public what has been attained, as from its intrinsic value it was thought worthy of being thus noticed. The Committee refer to the Organ Harmoneum, of which two were contributed by the same firm.

One of these has a pedal bass, the other has none; and both have two banks of keys.

The latter has eight stops, viz.: Dulciana, Flute, Hautboy, Bourdon, Diapason, Principal, Expression, Coupler.

Of these, the first four are speaking stops, and each of them extends through the entire compass of the keyboards, which are five Octaves in extent. The Dulciana and Flute act upon the upper bank of keys, and the Hautboy and Bourdon upon the lower. From this, it will be perceived, that there are four complete sets of reeds in the instrument, each extending through its entire compass. These four sets of reeds are voiced in such a manner as to give to each a quality of tone peculiar to itself, and imitate so closely the organ stops, whose names they bear, that the ear can with difficulty distinguish between them; a result which obviates the great objection which has heretofore been urged against reed instruments.

The Dulciana and Flute are voiced quite soft, the Hautboy louder, so that when combined a full organ-like tone is produced, of great power and effect. The Diapason and Principal are swell stops, acting respectively upon the Dulciana and Flute. The "Expression" stop is peculiar to this instrument, and is the invention of the makers, by whom also it has been patented. Its effect, when drawn, is to shut the main or receiving bellows, so that the slightest motion of the feet upon the pedals operates the two exhausting bellows and affects the power of the tone produced, enabling the performer to get every gradation of tone, from PP through crescendo and diminuendo to FF, and back again. By means of this, also, all the effects of sforzando, tremolo and affetuoso, can be produced at will. This is an entirely new and valuable improvement, and under the control of a skillful performer must be a desirable addition.

The Coupler, as its name implies, connects the two banks of keys together, so that they act as one, precisely as in the Organ. By this arrangement of stops, coupler, &c., every grade of power can be produced, and when all are in operation a volume of tone is obtained which makes the instrument worthy of being classed with Organs of moderate size, while the cost of an instrument constructed upon this plan being very much less, will render them, as they become more and more known, formidable competitors of that kind of instruments.

In the "Harmoneum" with pedal bass, the general mechanism, as regards stops, coupler, &c., is the same as that already described, but the "Expression" stop is left out and a "Pedal Coupler" substituted. The compass of the pedals is two full octaves, from CC to C, for which there is an independent set of reeds, so voiced as to resemble, as nearly as possible, the sub-bass of the Organ. It has, in addition, a swell pedal, and the bellows is worked by a lever at the back of the instrument, and a tell-tale is placed in a conspicuous place, so the blower is kept informed of the quantity of wind in them. By means of the couplers the pedals can be connected with any one or more of the stops of either or both key-boards. From this description it will be seen that this instrument is altogether different from and far in advance of any that have been heretofore manufactured of its kind. It comes very near in tone to the Church Organs of moderate size and power, while in volume of sound and extent of combination, it more than equals them. Whether the enterprise of those engaged in their manufacture will carry them as far ahead of their present degree of excellence as the results of the three past years has brought them, remains to be proved. With all the foregoing in view, and without discussing the question whether reed instruments can ever be made to equal the Organ in its best qualities, the Committee recommend that to Mason & Hamlin, for their great and valuable improvements in the Organ Harmoneum exhibited by them, be awarded a
Gold Medal.

To Mason & Hamlin, for their Melodeons of superior quality of tone, a
Silver Medal.

To S. T. & H. W. Smith, *Boston,* for their Melodeons, a
Bronze Medal.

To Nichols & Gerrish, *Boston*, for their Melodeons, a *Diploma.*

To L. Louis, *Boston*, for his "Tremolo Attachment," by which many and very beautiful effects are produced, and the use of which, while they would not be considered as deciding upon its ultimate value, the Committee think, in the hands of a competent and judicious performer, is capable of being made a very expressive and pleasing feature of any performance, a *Diploma.*

To Nichols & Gerrish, for a Melodeon, a *Diploma.*

The attention of the Committee was next directed to a Chime of Twelve Bells, ranging from D below the staff to G above, including two F's ♯, and one C♯, and so representing the two keys of D and G, as in the table following :—

PITCH OF BELL.	DIAMETER.	WEIGHT.
D	55 inches.	3,148 lbs.
E	47$\frac{3}{4}$ "	2,096 "
F♯	42$\frac{5}{8}$ "	1,432 "
G	40$\frac{3}{4}$ "	1,348 "
A	35$\frac{3}{8}$ "	841 "
B	32$\frac{7}{8}$ "	727 "
C	31$\frac{1}{4}$ "	613 "
C♯	29 "	494 "
D	27$\frac{5}{8}$ "	436 "
E	25$\frac{1}{4}$ "	375 "
F♯	22 "	231 "
G	20 "	198 "

Total weight, ... 11,939 lbs.

This Chime was contributed by the widely known firm of Henry N. Hooper & Co., the sound of whose "tongues," spread far and wide over the land, makes vocal many a hill and valley, on the blessed day consecrated to rest and to worship, — calls many a laborer to his daily toil, and gives him note to rest, when the day's toil is done. How could man live without bells? And how full of interest must be the history of bells, whenever it shall be well written, beginning with the little golden bells that adorned the hem of the Jewish High Priest's robe, taking up that of the *codones* of the sentries round the Greek camps, and those of the Greek fish markets; that of the petasus and tintinnabulum of the Roman baths, and coming down to the larger bells of merry England, the "Guthlac" of the Abbey of Croyland, with its associates, "Bettelin," "Turketul," "Tatwine," "Pega," and "Bega;" a ring of bells, of which the venerable Bede says, about the close of the seventh century, "that no such chime of bells could be found in all England;" and down further to those monster bells of Moscow, — that of St. Ivan's towers, weighing 128,000 lbs.; that of the Cathedral, weighing 288,000 lbs.; and that of the Empress Anne, weighing 432,000 lbs., and standing 19 feet high, and being 21 feet in diameter! Into such a history must come the musical history of bells, and this, not its least interesting department, must be complete in the "Chapter on Chimes," and give us complete illustrations of what mean the single bob, the plain bob, the grandsire bob, the bob major, the bob royal, and the bob maximus, and all the varied bobs of a complete and perfect chime! But the Committee are wandering, and must return to the "chime in hand," and do so by saying that, after a long and very careful examination, testing each bell separately, and in the progressions of the chime, both melodically and in harmony, they recommend that there be awarded for their goodness of tone and adaptation to each other as a chime, a *Silver Medal.*

There were two other Bells, not of the chime, from the same excellent establishment, both possessing good tone and clear resonance.

The Committee next examined the remaining musical instruments submitted to them, consisting of —

A Musical Rocking Chair.

Four Flutes, by Berteling, being
    One in B♭,
    Three in D.

Two Octave D Flutes, by same maker.

Two Clarionetts, by same maker,
    One in B♭,
    One in E♭.

These were all well made instruments, and some of them uncommonly good. One of the D flutes was very excellent. An award is recommended for the whole, of a *Silver Medal.*

The "Musical Rocking Chair" was, certainly, a unique novelty. Within the seat was arranged a sort of compact set of reeds, so adjusted that when one sat down and rocked to and fro, he "discoursed most excellent music," and might easily rock himself "to sleep, perchance to dream," to the music of his own fundamental harmonics. Or, viewing it in the light of "a blessing to mothers" who cannot sing "their fondlings to repose," it commends itself as a means of rockaway lullabies, never till now made vocal in nursery realms. Its ingenuity justifies a *Diploma.*

One of the Violins contributed by J. H. Arey, was a newly-made instrument, of very fair quality of tone, for which the Committee recommend a *Diploma.*

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The attention of the Committee was lastly directed to specimens of Sheet Music, entered by Nathan Richardson, of the "Musical Exchange," Boston. The designs were of superior style and finish, and the whole appearance of the printing, from engraved plates, executed under the immediate superintendence of Mr. Richardson, was eminently clear and excellent.

Examination was also made of Mr. Richardson's "Modern School for the Piano Forte," entered by him as a specimen of music printing from electrotype plates, it being the first musical work ever printed by the common letter-press method, from such plates. There was a uniformity and clearness of impression in an uncommon degree, and, throughout the work, an evenness of appearance and execution rendering every note on every page, perfectly plain to the eye of the player. This is a great merit in music printing, and one not always nor easily attained. The work, itself, as a system, is most highly recommended, by the leading composers and teachers of music, at home and abroad, and by musical journals in Boston and New York; and, although the Committee entertained doubts whether it were strictly within their province to adjudicate upon any "system of instruction" for any instrument, yet, as this had been received by the government of the society, and admitted for competition as such, and had been thus brought legitimately before them, and as it had received the high sanction and recommendations of most eminent Pianists, three of whom were members of this Committee, they decided to award to it a *Silver Medal.*

82. E. G. WRIGHT, *Boston.* Silver Bugle. This Bugle seemed upon trial to be a very satisfactory instrument, and quite correct in intonation; and the workmanship was good. *Bronze Medal.*

1592. WHITE BROTHERS, *Boston.* Violins and Guitars. The Guitars were good instruments, of more than common power and richness of tone. The Violins were highly creditable to the manufacturers as specimens of work, but were unattended with the usual accompaniment — a bow, so necessary to produce the proper vibrations and prove their quality. For these instruments, the Committee award a *Bronze Medal.*

FINE ARTS.

GEORGE DERBY,
JOSEPH BURNETT,
E. W. BOUVÉ,
WILLIAM APPLETON, JR.,
Judges.

THE Committee desire to say that the special department of the Exhibition upon which their judgment has been asked, and to which their attention has been directed, can give no adequate idea of the present state of the fine arts in New England. There is, indeed, to be found, throughout the halls, evidence enough of improvement in the application of the rules of beauty and fitness, both in form and color, to articles of daily use ; but the special collection which it becomes their duty to analyze, comprises a great variety of contributions, admitted, seemingly, without careful examination, and many of them necessarily placed in very unfavorable situations. Were they, however, so grouped as to produce the best effect of which they are capable, the Committee believe that the collection would, as a whole, appear incongruous and unsatisfactory. There are some works of truly high art, many of beauty and taste ; but their effect is greatly impaired by the presence, on all sides, of articles entirely wanting in merit, whose influence upon the eye and mind of the public must be injurious, and which must, also, tend to prevent our best artists from offering their works at future Exhibitions of the Association. We beg leave to suggest the appointment, in future years, of a Committee whose duty it shall be to rigidly exclude all articles of the character to which we have alluded.

PHOTOGRAPHY.

In this department there is much to excite our admiration, and which we can freely commend. The Committee have given careful attention to the various collections offered for examination, and, if their judgment is not unanimous, it is owing to the high degree of excellence attained by several of the contributers. In daguerreotypes, no marked improvement is apparent during the past three years. The pictures of this class offered by Messrs. Masury, Silsbee and Case ; Southworth & Hawes ; Hesler ; and Whipple & Black, are each and all of the highest order.

The ambrotypes, by Mr. D. W. Bowdoin, are also very satisfactory in execution, and if, as asserted, they possess greater durability than the pictures on metallic plates, they have a strong claim on our attention.

The word *photograph* has been distinctively applied to pictures upon paper, and in this sense we use it. They are offered for our examination, in various conditions :—

1st. Plain, as they came from the action of sunlight, through the negative glass plate, upon the prepared paper.

2d. With their tone heightened by washes, usually of gum water, producing an effect similar to that of varnish upon a painting.

3d. More or less changed by pencilling with India ink.

4th. Painted in water colors.

5th. Painted in oils.

All of these may be considered fair and legitimate ways of making an agreeable picture. Many of our best portrait painters do not hesitate to avail themselves of the aid to correct drawing furnished by the transfer of photographic outlines to their canvass, and, on the other hand, skillful artists are employed by our photographers for the coloring of their pictures upon paper. In these cases all traces of the foundation are covered by the superstructure, except to an experienced eye. The Committee are of opinion that such pictures must be judged as paintings, and in this view they prefer to all others those executed by Mr. W. Winter, of Chicago.

A peculiar charm of the photographic art is that by which it satisfies the mind of absolute truthfulness of representation. This is, in a measure, lost by any alteration or deepening of the lines, or by the addition of color. That it is not required is proved by specimens offered by several of the contributers. The Committee are unanimous in thinking that photographs untouched by brush or pencil are of highest value. They are not, however, of one mind as to the comparative merits of those offered by two of the contributers whose works they think the best. They find, in a large number presented by Messrs. Whipple & Black, excellent grouping, great clearness and distinctness of outline, and a most agreeable effect. In those offered by Messrs. Southworth & Hawes, a peculiar delicacy, very appropriate to many of the subjects, and giving to the flesh a softness similar to that observed in the engravings of Raphael Morghen. There is, also, a breadth of effect in some of their photographs, which the Committee would highly commend. The productions of both these establishments are so good that we desire to leave them upon equal terms. The Committee would have been pleased to find among the photographs more representations of inanimate objects. Our artists find it for their present interest to confine themselves almost exclusively to the human face. The same skill directed to the copying of the highest order of pictures which may be accessible, would, certainly, produce valuable results.

SCULPTURE.

Mr. Ball's reputation, as an artist of high rank, rests securely upon his noble bust of Webster. At the present Exhibition he offers, for the first time, his bust of the late lamented President of this Association, Jonas Chickering. This is, also, worthy of the fame of both the subject and the artist.

The design for Plymouth Monument, modelled in wood and plaster, has been a most conspicuous object in the rotunda. The simplicity and impressiveness of the monument itself, and the dignity and appropriateness of the figures, even in their present small proportions, vindicate to every eye the claim of Mr. Hammatt Billings to the highest rank in his profession.

PAINTINGS.

But few of the paintings have commended themselves to our favorable notice. Among those in the rotunda are several so bad in execution that the Committee can only hope that the standard of art recognized by the Association, in receiving them, has not been accepted by any of the thousands who who have seen them. They would also express the wish that the pictures known as "Grecian Paintings," may be excluded from future Exhibitions. They are engravings, colored in such a way as to resemble oil paintings upon canvass. They are false and meretricious, in all respects, and their production can by no means be considered a department of the fine arts, but is a misuse of time, and often a destruction of good engravings and lithographs.

Similar observations might be made of the pictures described in the catalogue as "Oriental." Drawings in pencil, of the simplest objects, from nature, would be of far greater value.

WOOD ENGRAVINGS.

Until within a few years, this branch of art was but imperfectly understood, or appreciated in this country. The extensive sale of many of the illustrated publications of London, has induced our own publishers to increase the attractiveness of their works in a similar way. The result has been a large increase in the demand for good engravers, and a consequent improvement in their works. Wood engraving, when executed in the very highest style of the art, cannot be surpassed in its brilliant and bold effects. This, together with the rapidity with which it can be executed, and the great advantage it has of being printed with the type, give it a superiority over every other form of illustration.

The specimens exhibited, although not quite up to the highest standard, are, many of them, beautifully executed.

The Committee, after careful examination, have awarded the best premium to those offered by Mr. John Andrew.

LITHOGRAPHY.

Messrs. John H. Bufford and L. H. Bradford & Co., have both exhibited very excellent specimens, which fully sustain the high reputation they already enjoy. It would be difficult to decide which of these contributers should receive the most praise.

6. Edward L. Adams, *Boston.* Specimen Crayon Drawing.
11. Joshua Cobb, *Boston.* Crayon Drawing.
18. John A. Boutelle, *Woburn.* Frame of Genealogy.
26. Miss Amanda M. Hancock. Frame of Painting on Glass.
27. Miss M. Merrill, *Pittsfield, Mass.* Pastel Sketch.
28. Mrs. T. P. Smith. Eight Frames of Oil Paintings.
41. George E. Johnson, *Waltham.* Pastel Heads.

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46. Miss A. H. Hall, *Boston.* Crayon Portraits.

56. John H. Daniels, *Boston.* Specimen of Plate Printing. *Diploma.*

57. F. O. Freeman, *Boston.* One Frame of Steel Engravings. These specimens, though tolerably well executed, are generally in that style, the tints of which are produced by the aid of the ruling machine, producing a flat and ineffective picture; quite as useful, perhaps, for many purposes, as any other mode, yet it cannot be considered equally artistic. *Diploma.*

63. Henry N. Gardner, *Boston.* Ornamental Painting on Tin.

76. G. C. Wright, *Boston.* Map Drawing.

77. W. A. Richards, *Boston.* Map Drawing.

88. Miranda Colburn, *Boston.* Pressed Head of Webster.

97. Miss L. W. Starbuck, *Cambridge.* Two Frames Pen Drawings.

104. John B. Roach, *Boston.* One Frame Copper Plate Printing. Very good specimens. *Diploma.*

116. A. Sonrel, *Woburn.* Drawings on Stone. The accuracy and beauty of these lithographs, illustrative of natural science, entitle them to our warmest commendation. *Silver Medal.*

121. Mrs. M. A. Baxter, *Waltham.* Painting on Glass.

124. C. Hubbard, Jr., *Chelsea.* Mechanical Drawing and Coloring.

126. Mrs. C. A. Boyden, *Somerville.* One Oil Painting.

137. Miss Mary Russell, *Salem.* Pastel Painting.

155. N. F. Smith, (apprentice,) *Boston.* Specimens of Letter Cutting.

158. C. A. Nelson, *Cambridgeport.* Three Frames Pencil Drawings.

164. A. Hesler, *Chicago, Ill.* Daguerreotypes and Photographs. Daguerreotypes equal to any in the Exhibition, for clearness and beauty. Arrangement of figures graceful and effective. *Silver Medal.*

165. W. Winter, *Chicago, Ill.* Painting of Photographs, for Hesler. Remarkably clear and transparent, rivalling in beauty the best miniatures upon ivory. *Silver Medal.*

179. Miss Adelaide Richardson, *Chelsea.* Two Frames Pencil Drawing.

199. John F. Smith. Copper Plate Printing. Very good specimens. *Diploma.*

203. Mrs. C. C. Holbrook, *Dorchester.* Grecian Painting.

206. John Andrew, *Boston.* Six Frames of Wood Engravings. Spirited in design; clear in execution; decidedly the best in the Exhibition. *Silver Medal.*

207. S. S. C. Russell, *Boston.* One Frame Wood Engravings. Good specimens. *Diploma.*

208. John Filmer, *Boston.* One Frame Wood Engravings. (See next number.) *Diploma.*

209. Samuel Cloues, *Boston.* One Frame Wood Engravings. These specimens, as well as those by John Filmer, though differing in style, exhibit considerable proficiency in the art of lining. *Diploma.*

210. Richard Dyer, *Boston.* One Frame Wood Engravings. *Diploma.*

213. Mrs. J. T. Boyd, *Charlestown.* Oil Painting.

219. James Wilson, *Boston.* Frame of Plate Printing. *Diploma.*

220. William H. Smith, *Boston.* Case of Die, Letter, and Seal Cutting. *Diploma.*

224. Ball Hughes, *Boston.* Three Burnt Poker Sketches.

225. Thomas Ball, *Boston.* Bust of Jonas Chickering. *Silver Medal.*

244. L. H. Bradford & Co., *Boston.* Six Frames Lithography. *Bronze Medal.*

248. C. F. Gerry, *Boston.* Three Frames Crayon Drawings.

252. Charles F. Thomas, *Boston.* Two Frames Specimens of Designing, Drawing, and Water Coloring. Very useful, and worthy of the encouragement of the Association. *Bronze Medal.*

253. F. N. Mitchell, *Boston.* Painting. Medal Engraving. Embossing. Seal Engraving. Mr. Mitchell's works are highly valued, and these sustain his well-earned reputation. *Silver Medal.*

258. O. S. Currier, *Boston.* Crayon Drawings.

260. Edwin Coleman, *Boston.* Oil Painting.

261. Mrs. A. D. Bugbee, *Boston.* Bronze Painting.

263. S. Gassner, *Boston.* One Frame Portrait.

267. Henrietta W. Hall, *East Boston.* One Oil Painting.

286. Mrs. C. C. Holbrook, *Dorchester.* Grecian Painting.

296. S. E. Brown, *Boston.* Frame Engravings on Wood.

303. Miss Abby E. Leland, *Somerville.* Pastel Drawing.

309. Miss E. M. Eldridge, *Newtonville.* Crayon Drawing.

312. Merriam Brothers. One Frame Die Sinking. Two of Stencil Cutting. Great variety of useful articles; well executed. *Diploma.*

319. Frank M. Blodgett, *Boston.* Oriental Painting.

332. Masury, Silsbee & Case. Photographs, plain and colored. Daguerreotypes. The specimens exhibited were very good, and some of them remarkably fine. *Bronze Medal.*

344. F. L. Randall, *South Braintree.* Painting on Glass.

345. L. Grozelier, *Boston.* Six Frames Lithographic Portraits. In the usual artistic style which has made Mr. Grozelier's works so highly appreciated. *Bronze Medal.*

351. George D. Russell, *Boston.* One Oil Painting. *Diploma.*

356. G. W. Sturtevant, *Boston.* One Oil Painting.

366. Miss Florence Le Fevre, *Charlestown.* Oriental Painting.

369. Albert Bierstadt, *New Bedford.* Four Oil Paintings. Very good landscapes of the modern German school. Correct in drawing; clear and transparent in tone. The best landscapes exhibited. *Silver Medal.*

378. Charles Storer, *Boston.* Two Oil Paintings.

382. La Roy Sunderland. New Style Painting on Glass.

398. Mrs. J. C. Park, *Boston.* Grecian Painting.

399. Parker, Eliot & Co., *Boston.* Four Frames Engravings.

404. Abbie A. Cutler, *Boston.* Map Drawing.

409. Miss A. Kimball, *Boston.* Crayon Drawing.

410. Miss L. Kimball, *Boston.* Oil Painting. *Diploma.*

414. Joshua Gray, *Boston.* Pencil Head.

417. Frank H. Smith, *Boston.* Pencil Drawing.

418. Miss M. E. Floyd, *Boston.* Monochromatic Drawings.

422. W. R. Hurlburt, *Cambridge.* Crayon Portrait, by Copley.

427. Alvan Fisher, *Boston.* Two Oil Paintings. Not in the best style of Mr. Fisher. *Diploma.*

432. Mrs. A. M. Smith, *Boston.* Grecian Painting.

433. Miss Caroline Gale, *Boston.* Painting on Glass.

435. J. W. Gear, *Boston.* One Oil Painting.

444. Miss M. A. Eastman, *Cambridge.* One Oil Painting.

447. Miss Annie L. Eddes, *Boston.* Grecian Painting.

452. Mrs. Judkins, *Boston.* Crayon Drawings.

470. D. G. Pike, *Boston.* Architectural Drawings. Very useful and exceedingly well done. *Bronze Medal.*

473. H. C. Sylvester, *Boston.* Map Drawing.

474. A. B. Brown, *Boston.* Map Drawing.

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479. Taylor & Adams, *Boston.* Two Frames Engravings on Wood. *Diploma.*

487. Miss H. M. Walker, *Boston.* Pencil Drawing.

501. C. & D. Cobb, *Boston.* Lithographs.

537. B. Otis, *Boston.* Two Oil Paintings. Portrait of Dr. Sharp, very good. *Diploma.*

539. Mrs. Caroline O. Carlton, *Boston.* Frame Oil Painting. A spirited and effective picture. Principal figure very well drawn. *Diploma.*

543. T. A. Carew, *Boston.* Sculpture — Medallion and Miniature Busts.

547. Miss Charlotte Gardiner, *Roxbury..* Two Frames Crayon and Monochromatic Drawing.

552. M. S. Cahill, *Boston.* Daguerretoypes, Photographs, and Ambrotypes. This artist has exhibited some fine plain photographs. *Diploma.*

561. Miss E. A. Flagg, *Boston.* Frame of Map Drawing.

564. J. E. Hobbs, *East Cambridge.* Carving and Crayon Drawing. *Diploma.*

565. Miss Caroline Gibson, *Boston.* Fruit Piece.

572. Frederick E. Stimpson, *Boston.* One Frame Isometric Drawing of Boston Gas Light Company's Retort Beds. This may be considered one of the most difficult and one of the best mechanical drawings in the Exhibition. A very perfect portrait of the retort beds, and deserves much praise. *Bronze Medal.*

573. G. K. Warren, *Lowell.* Photographs. All remarkably pure, and apparently free from touches with brush or pencil. *Bronze Medal.*

591. B. Maclin, *Boston.* Case Die Sinking and Book Ornaments. Clean and nicely cut. Well executed in all respects. *Bronze Medal.*

609. New England Bank Note Company, by Isaac Cary, *Agent.* Specimens Bank Note Engraving. A superior collection of bank note vignettes. *Bronze Medal.*

629. D. C. Johnston, *Boston.* One Frame Oil Painting, and Four Drawings.

639. Mrs. M. O. Walker, *Boston.* One Frame Monochromatic Painting.

640. Mrs. O. T. Stone, *Boston.* One Frame Colored Monochromatic Painting.

657. Miss Anna B. Balch, *Boston.* One Grecian Painting.

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669. P. Stephenson, *Boston.* Three Marble Busts — Truth, Psyche, and Indian Girl. The Committee cannot give unqualified praise to either of these works. They are, however, by no means wanting in merit, and we award them a *Silver Medal.*

670. G. V. Allen, *Boston.* Photographs and Daguerreotypes. These pictures are generally of the class referred to before, as being materially changed by pencilling with India ink. *Diploma.*

677. Miss M. A. Pettengill, *Lawrence.* Six Frames of Specimen Paintings.

680. N. S. Dearborn, *Boston.* One Card of Engraving and Printing. Good specimen of card engraving. *Diploma.*

683. D. W. Bowdoin, *Boston.* Ambrotypes. *Diploma.*

686. Southworth & Hawes, *Boston.* Photographs. Daguerreotypes and Stereoscopes. *Silver Medal.*

689. A. L. Rawson, *Medford.* One Frame of Ink, Sepia, and Water Color Drawing. A pleasing group of sketches. *Diploma.*

690. Miss Eleanor Breasha, *Boston.* One Frame Map Drawing.

727. Margaret F. Foley, *Boston.* Case of Cameos.

730. Miss H. A. R. Hatch, *Charlestown.* One Frame Oil Painting.

742. M. Wight, *Boston.* Five Portraits — J. Cotton, S. Perkins, G. Darracott, G. G. Smith, and H. N. Hooper. Good portraits. Correctly drawn; excellent in tone; coloring warm and lifelike. *Silver Medal.*

744. F. G. Haynes, *Cambridge.* Three Portraits — Daniel Messenger, Joseph T. Buckingham, and Joseph Lewis.

746. Bass Otis, *Boston.* Portrait of Jonas Chickering.

762. Goupil & Co., *New York.* Case of Artists' Brushes. *Diploma.*

776. M. Ormsbee, *Boston.* Photographs and Daguerreotypes.

796. Miss Kelly, *Boston.* Two Small Frames Oil Paintings.

797. Whipple & Black, *Boston.* Photographs, plain and colored. Daguerreotypes. *Silver Medal.*

824. Miss J. R. Cutler, *Boston.* Grecian Painting.

827. M. J. Whipple & Co., *Boston.* Crystalline Tracing Linen. A useful article, carefully prepared. *Diploma.*

832. G. J. & G. E. Johnson. Specimen of Painting on Glass.

833. J. F. Holman, *Boston.* Specimen Painting on Glass.

863. T. P. Lerned & Co., *Boston.* Bust in Coal.

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893. D. T. Smith, *Boston.* Two Frames of Letter Engraving and Wood Cutting. *Diploma.*

901. George W. Hill, *Boston.* Engraving on Wood.

915. Michael Woods, *Boston.* Mausoleum Daguerreotypes Cases.

921. Hammatt Billings, *Boston.* Model of the Forefathers' Monument. The design for this great national work, modeled in wood and plaster, consists of a figure of Faith, standing on an octagonal pedestal, from which projects four buttresses, upon which are seated figures emblematic of the principles of the Puritans. Niches for statues, carrying out the same idea, are provided upon the sides of the seats, while the various faces of the pedestal are occupied with appropriate bass-reliefs and inscriptions. The effect of this design is most impressive, and the Committee are of opinion that it merits the highest award, a *Gold Medal.*

946. T. Lassell, *Auburndale.* Crayon Drawing.

962. Annie G. L. Gilman, *Somerville.* Crayon Drawing.

1021. Mrs. M. S. Parker, *Boston.* Specimen of Painting on Glass.

1313. John H. Bufford, *Boston.* Specimens of Colored Lithographic Drawings. *Bronze Medal.*

1406. J. J. Fontarive & Co., *Boston.* Eight Frames of Designs. Designs for Carpets, Calicos, Mousselines, Piano Covers, &c. Displaying excellent taste and appropriateness. We think this a most important branch of art, and deserving the encouragement of the Association, and award a *Silver Medal.*

1419. Mrs. E. A. Holly, *Lowell.* Two Pieces Leather Frame Oriental and Antique Painting.

1443. Miss S. S. Cragin, *Chelsea.* Specimen of Map Drawing. This is among the best offered at the Exhibition. We think them highly useful, and deserving more attention than is usually given them in schools. *Diploma.*

1663. Miss S. D. Barker, *Charlestown.* Two Frames Water Colors. *Diploma.*

1681. Mrs. C. A. Stimpson, *Charlestown.* Three Oil Paintings.

PENS AND PENMANSHIP.

Samuel Lane Wheeler, George B. Hanover,
George F. Osborne, *Judges.*

The Committee have carefully examined the specimens of Penmanship presented to their notice, and while they are disposed to award just commendation to those of an ornamental character, they feel that too particular attention can not be given to those illustrating good mercantile handwriting.

It is proper to remark that many of the specimens of ornamental penmanship and pen drawing, have been in previous Exhibitions of the Association, and received favorable mention. They cannot, of course, claim particular notice at this time.

The Committee gave much of their attention to the specimens of practical business penmanship presented. In view of the fact that there are many in our community, of acknowledged excellence in this respect, the comparative fewness of the specimens offered seems surprising, and much to be regretted.

1028. Comer & Co., *Boston.* Ornamental Penmanship. Four large specimens, framed; very finely executed.

1220. Payson, Dunton & Scribner, *Boston.* Specimens of Writing Books. This seems to be an excellent system.

1622. Dunton & Chapman, *Boston.* Plain and Ornamental Penmanship and Pen Drawing. Several of these specimens have been exhibited before, and received a Silver Medal. They show evidences of long practice, and great skill, as well as excellent taste on the part of Mr. A. R. Dunton.

952. Mrs. A. R. Dunton, *Boston.* Specimens of Penmanship. Very beautifully executed. The best offered by a lady. *Diploma.*

1623. A. R. Dunton, *Boston.* "Original Duntonian System of Rapid Writing. Revised and improved, with copies at the head of each page, and directions to pupils prefixed to each copy. Punctuation taught by written lessons." The Committee having carefully examined this series of writing books, do not hesitate to commend them as valuable auxiliaries to teachers, and deserving of extensive use. *Diploma.*

1611. N. D. Gould, *Boston.* Two Frames Ornamental Penmanship, executed and contributed by him; "written, not painted; no stroke of a letter retouched with the pen." These specimens, by one who has reached the age of seventy-five years, are remarkably well executed, and deserving of high praise. The Committee take pleasure in awarding to Mr. Gould a *Diploma.*

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9. Comer & Co., *Boston.* Case of Specimens of Penmanship, Steel Pens, and Copy Books. The Committee are of opinion that the specimens of mercantile writing here presented, executed by Mr. Oliver E. Linton, are superior to any others. They were all written without retouching, and are elegant examples of chirography. The copy books, based upon the same style of writing, are worthy of commendation. The steel pens, manufactured for Mr. Comer, were tested by the Committee, and proved highly satisfactory. Deeming penmanship a study of much importance, the Committee feel warranted in awarding to Messrs. Comer & Co., for the best specimens of mercantile writing, executed by Mr. Linton, a *Silver Medal.*

17. David W. Foster, *Boston.* Book of Specimens of Business Writing. These specimens show a commendable desire to improve the style of business writing, and are entitled to approval.

61. Charles W. Norton, *Boston.* Two Frames Map Drawing, well done.

211. Stimpson & Co., *Boston.* Case of Gold Pens. Mr. Stimpson called the attention of the Committee to two new styles of gold pen; the "Commercial Ionic," which they consider an improvement upon his "Ionic," which was itself a very fine pen; and the "Corrugated," for which he claims greater strength and durability, and greater capacity for holding ink, than any other gold pen. Mr. Stimpson is entitled to great praise for his successful efforts to improve the gold pen. *Diploma.*

373. Hanaford & Payson. *Boston.* Specimens of Plain and Ornamental Penmanship. "Board of Management of the Mercantile Library Association, for the years 1855-6. Executed by Mr. J. W. Payson." Very fine. *Diploma.*

430. James Robinson, *Boston.* "Merchant's, Student's and Clerk's Manual, by James Robinson, late Principal of the Mathematical Department of the Bowdoin School, Boston." An invaluable work to the business man. The Committee would recommend its use in every counting-room.

295. J. B. Adams, *Boston.* Pen Printing. "Declaration of Independence." In previous Exhibition. Well done.

97. Lydia W. Starbuck, *Cambridge.* Pen Drawing. Two Frames. Very creditable specimens of this kind of penmanship.

845. A. D. Bill, *Boston.* Penmanship and Pen Drawing. Well executed.

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PRINTING, BINDING, AND BOOKS.

Nathaniel B. Shurtleff,	Thomas Niles, Jr.,
James M. Everett,	Oliver Holman,
	Judges.

The Committee have made a thorough examination of all the articles in the Exhibition, submitted to them, and have recommended the customary awards.

As a general rule they have avoided recommending the giving of medals for meritorious productions, when they have been made aware that the same have been awarded to the same individuals, at previous Exhibitions of the Association, for the same or similar contributions.

In some cases they may have recommended the bestowal of a high reward for contributions which excel but in a slight degree those to which a small premium, or even none, was adjudged ; and, in so doing, reluctantly adopted a course which they thought would best carry out the objects of the Society in establishing the Exhibitions.

The specimens submitted have generally been of a high order, fully sustaining the character of our mechanics and manufacturers, already acquired, for the ingenuity and practical value of their productions.

It is a matter of regret, that, in a city so noted for its excellence in the typographical art, and so teeming with the useful inventions and improvements in this department, there have been so few specimens connected with the noble art, and that so few specimens of really good printing have found their way into the Exhibition, and that these were chiefly presented for the excellence of their binding or for exhibition only.

The articles referred to the Committee on Printing, Binding, and Books, are enumerated below, with the names of the awards recommended by the Committee.

3. Joshua Bradford, *Portland, Me.* Bookbinders' Tools. Two very good and substantially made binders' cutting presses, and a neat-looking plough, for trimming the edges of books.

5. Charles W. Hawkes, *Boston.* New Lion Press. In some respects a very convenient and useful press for printing small jobs of the letter sheet size and under. *Diploma.*

50. William Stocker, *Chelsea.* Sprague's Patent Form Lock and Wrench. This instrument will be found of use in printing offices. *Diploma.*

59. Stodder & Loring, *Boston.* A Case containing a Ledger and Journal. The ruling of the books is good, evincing care and skill in its per-

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formance, and the binding displays great taste and excellence in its execution. The Committee consider this the most elaborate specimen of blank book binding in the present Exhibition, and, therefore, consider it deserving of a *Silver Medal.*

78. William C. Demaine, *Boston.* Paging Machine. This machine is constructed for printing the page number on the corners of blank books, and for that purpose is well adapted. The instrument exhibited can print numbers containing six figures, and is an admirable machine for performing good work. *Bronze Medal.*

82. Edward L. Balch, *Boston.* Three Specimen Books of Job Printing and One of Newspaper Printing. The productions are very creditable to an enterprising mechanic. In consequence of having previously received a Bronze Medal, the Committee deem Mr. Balch deserving, for his present contribution, a *Diploma.*

118. S. P. Ruggles Power Press Company, *Boston.* One Diamond Card Press. One Bill-head Rotary Printing Press. One Combination Printing Press. Some improvements have been made upon these presses since medals were awarded at previous Exhibitions. Most of the printing performed at the Fair was done on these presses. *Diploma.*

The Committee think it proper that there should be awarded to Messrs. Damrell & Moore, and George Coolidge, for their excellent work at the Exhibition, a *Diploma.*

195. J. H. Stimpson, *Boston.* Gas Stove, for bookbinders' use. An excellent and convenient article for the purposes for which it is intended. It will undoubtedly commend itself to such binders as use hand tools in their mechanical operations, as an expeditious and neat means for heating tools. *Diploma.*

201. James French & Co., *Boston.* A Case of Books. Various styles of binding. The portable copying press is a convenient article for travellers' use.

218. F. Gilson, *Boston.* Specimens of Bookbinding. The case contains several specimens of binding, some of the volumes being most elaborately finished, evincing great taste and ability in the use of hand tools. Especially deserving of notice is the style of lettering on the backs of the books, in which respect the specimens in this case are pre-eminently superior to the general run of work exhibited. One book displays an uncommon amount of labor, most judiciously, carefully and tastefully bestowed. Great attention has been given, also, to the forwarding as well as the finishing of these specimens. *Silver Medal.*

223. THOMAS GROOM & CO., *Boston*. Case of Account Books. A very well selected collection of books, of various sizes and styles of binding; well ruled, and some with printed headings and paged. Evincing the usual good taste and substantial workmanship pertaining to the manufactures of this establishment. T. Groom & Company having already received Silver Medals, at previous Exhibitions, for similar articles, the Committee recommend, on this occasion, a *Diploma.*

256. GORDON FORREST, *Boston*. A Specimen of Ornamental Printing. A large poster, printed in many colors, and tastefully and well executed. *Diploma.*

313. WILLIAM C. DEMAINE, *Boston*. Specimen of Book Ruling and Binding. The ruling and paging are well done; and, in these particulars, the specimen is deserving of notice.

337. AMERICAN MACHINE STAMP COMPANY, *Boston*, by Cutter, Tower & Co., *Agents*. A machine for Inking and Stamping. Convenient for use. *Diploma.*

429. JOHN GAULT, *Boston*. Russell's Patent Hand Stamp. Apparently an instrument of utility, but the specimen is much out of order.

442. L. N. ROSENTHAL, *Philadelphia*, by Eben F. Gay, *Agent*, *Boston*. A Specimen of Printing in Colors. A highly elaborated work of art, exhibiting a view of the Grand Lodge Room of the new Masonic Hall, Chestnut Street, Philadelphia. *Diploma.*

443. BOSTON HAND STAMP COMPANY, *Boston*, by M. B. Bigelow, *Agent*. One Case Specimens of Stamps. For improvement on these articles since the last Exhibition, the Committee award a *Diploma.*

482. MORRILL & SON, *Boston*. Specimens of Printing Ink. Mr. Morrill has received a Diploma at a previous Exhibition; but for improvements since, the Committee award a *Diploma.*

503. MCLELLAN & CO., *New York*. Specimen of Printing in Oil Colors. A beautiful work of art. *Diploma.*

542. JAMES H. PLANKINTON, *Boston*. Specimen of Ruling. Very well executed.

544. NEW ENGLAND HAND STAMP COMPANY, *Boston*. Hand Stamps. One for printing with ink, and one for embossing. Both good.

634. ROBERTS BROTHERS, *Boston*, Case Books — Specimens of Binding. The books in this case are bound in a most thorough and workmanlike manner. The forwarding is particularly well performed. One large volume exhibits an uncommon ability in the use of hand tools, and is deserving of high commendation for the manner in which it was forwarded. As a whole,

the workmanship is of a superior order, and, therefore, has been considered worthy of a *Silver Medal.*

641. Alexander Moore, *Boston.* One Case of Specimens of Bookbinding. A good display, in various styles of binding. For exhibition only.

659. Charles H. Clark, *Boston.* A Frame of Illuminated Business Cards. Neatly executed.

713. Simonds Holt, *Boston.* Hand Stamps. Good of their kind, and of convenient construction.

802. C. B. Russell, *Boston.* Books — Specimens of Binding. Very creditable to the workman.

812. Andrew Holland, *Boston.* Book Printing. The book exhibited contains specimens of the type cast at the foundry of Phelps & Dalton, and is remarkably well printed, and satisfactorily exhibits the numerous and well-selected assortment of types of this well known establishment. *Diploma.*

815. P. A. Ramsay, *Boston.* Self-inking Power Hand Stamp. A wooden model, which promises well.

823. J. S. Potter, *Boston.* Specimens of Crystal Printing, Ornamental Printing, and Printing in Colors. These are all well executed and bespeak the workman. The crystal printing is a new application of materials, and is deserving of particular notice, and is considered, with the other printing, as entitling Mr. Potter to a *Bronze Medal.*

Ruggles's Diamond Printing Press. This turned off much good work in the Exhibition.

825. Horace Barnes, *Boston.* Specimen of Ancient Printing. Being an old proclamation issued by Governor Belcher, on the occasion of a public fast in the Province. For exhibition only.

831. Luther Stevens, *Boston.* Case of Books. In various styles of binding, and creditable as works of art.

872. Rice, Kendall & Co., *Boston.* Binders' Boards. Of very excellent quality; much superior to any other article in general use. *Diploma.*

873. C. L. Fowle, *Boston.* Chamberlain's Patent Hand Stamp. Two specimens. Both useful for their purposes.

894. B. Bradley & Co., *Boston.* Case of Bookbinding. This case contains many specimens of cloth binding, in which style of work this enterprising firm are unsurpassed. The books bound in morocco are superior to any others in the Exhibition that are not bound and finished by hand tooling. As Silver Medals have been awarded to this firm, for similar work, at previous Exhibitions, and as the specimens are for exhibition only, no award is deemed necessary.

912. O. F. GROVER, *Middletown, Ct.* A Composing Stick for Printers. Intended to save time in jobbing.

1039. R. T. KNIGHT, *Philadelphia.* Case of Specimens of Safety Envelopes, of various sizes and colors. There is a peculiarity in the construction of these articles which entitles them to special consideration and make them what they purport to be. *Diploma.*

1486. PUTNAM BROTHERS, *Boston.* Case containing an Assortment of Books, in different Bindings. The specimens exhibit many good styles of library binding, carefully and well performed.

1584. L. THAXTER, *Boston.* Two Rotary Calendars. Useful in counting-rooms and public offices.

1637. N. M. BUFFINGTON, *Fall River*, by C. F. Mayo, *Boston.* Every-day Register. Office-Hour Register. Meal-Hour Register. Post Office Register, &c. These contrivances will be found very useful in their way.

ORNAMENTAL AND NEEDLE WORK.

MRS. A. M. CONANT, MISS ANN E. COFFIN,
MISS HARRIET TUTTLE, MISS MATILDA GODDARD,
Judges.

THE Committee on Ornamental Needle Work, &c., of the Massachusetts Charitable Mechanic Association, beg to report that, an unusual number of specimens have been presented by various persons for equally diverse purposes.

Some are marked by the unmistakable touches of genius; beautiful in execution, and alike acceptable and creditable to the society.

In others, the makers have followed in the beaten track, and if they have not elicited admiration, they have not, certainly, offended good taste.

In justice to the cause, we must present, with all becoming charity, the third class. A limited experience, a low ideal, or, it may be, mere calculation to obtain a free pass, have brought many articles to the tables which should never have encroached upon the duties of the Committee. While we welcome and encourage the humblest effort of the child, wisely directed to industrial ends, and rejoice in the simplest product of those shorn of any sense, and reverently accept all creations of the aged, which have helped to idealize their declining years, we must be permitted to express our regret at the low standard of much that has been presented; and we would throw out as a suggestion only, that, perhaps, it might be profitable, in future, to appoint a committee of acceptance, to *leniently* cull the chaff from the wheat, and thus give merit a chance to be seen.

The best specimens of needle work are not found at these Exhibitions; and we shall not have spoken in vain if we have said aught to encourage our sisters to bring their rarest offerings, of utility and beauty, to grace these calendar occasions of our material prosperity.

Through the courtesy of our brothers, the ranks are open to all, and we should appreciate our privileges by meeting public expectation.

No doubt many will be disappointed, at what they may consider our unequal judgment and scanty rewards; but we have acted impartially, according to our light, measured by heights so often attained in private circles, and only regret the imperfect manner in which our difficult task has been accomplished.

As in former years, Mrs. Stimpson has kindly placed in the hall, one of her tasteful gems. Comment, on our part, seems unnecessary. Its well-selected subject, delicate arrangement, and faultless coloring, attract the attention of every eye. Since it is not entered for competition, we can only award the lady the meed of our approbation and thanks.

433. Miss Caroline Gale, *Boston*. Leather Frame. Fair specimen.

440. Mrs. Oliver Swain, *New Bedford*. Masonic Apron. *Diploma.*

496. James S. Parslow, *Boston*. Ladies' Pin Cushion. Beautiful article. *Bronze Medal.*

1003. Mrs. E. J. Colburn, *Malden*. Ottoman Cover.

1011. Charles H. Dolbeare, *Boston*. Frame of Worsted-work.

1012. Mrs. M. A. Cooley, *Boston*. Frame of Worsted-work. Deficient in flesh-coloring; otherwise very meritorious. *Bronze Medal.*

1014. Mrs. Mary J. Beach, *Boston*. Embroidered Skirt.

1016. Mrs. P. F. Jones, *Charlestown*. Album Quilt. Regular in arrangement.

1017. Mrs. C. A. Leavett, *Boston*. Patch-work Chair. Good specimen of the kind.

1018. Mrs. N. B. Clark, *West Medford*. Lamp Mat.

1020. Mrs. E. Nichols, *Boston*. Fancy Pitcher. Two Tumblers. Two Clove Apples. Crochet Tidy. Tidies. Cheneille Head Dress. One Card Book Mark. One Card Fancy Articles. One Smoking Cap. One Lace Collar.

1022. Miss Emma L. Goodwin, *Chelsea*. Worsted Embroidery. Defective in coloring. *Diploma.*

1025. Mrs. John H. Fultze, *Charlestown*. Knit Quilt. Containing 1085 pieces. *Bronze Medal.*

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1026. MRS. S. T. DAMON, *Boston.* Vase Worsted Flowers.

1027. GEORGE PACKER, *Boston.* Frame of Ornamental Leather-work.

1030. JOHN WHEELER, *South Danvers.* Five Rolls Carpeting. Ingenious. *Bronze Medal.*

1032. MRS. M. L. FULLER, *Charlestown.* One Quilt.

1033. MISS ELLEN A. CUTTER, *Somerville.* Child's Embroidered Dress.

1034. MRS. M. H. MERRIAM, *Chelsea.* Silk Chair Covering. Neatly put together.

1035. MISS M. J. CROÇKETT, *Boston.* Ottoman Cover.

1036. MISS B. ALLEN, *Boston.* Specimen Linen Edging.

1037. MRS. M. J. MCINTOSH, *Boston.* Lamp Mat and Tidy.

1038. MISS R. R. THAYER, *Boston.* Bead Toilette Cushion.

1042. MRS. C. P. IRELAND, *Boston.* Two Vases Fancy Work. Pretty.

1044. MRS. H. CULVER, *Boston.* Specimen Leather-work.

1045. MRS. E. W. SPARHAWK, *Cambridgeport.* Specimen Lace-work. Very superior. *Bronze Medal.*

1046. MRS. E. L. FARNHAM, *Boston.* Silk Embroidery. Showy.

1048. MISS A. BRADLEE, *Boston.* Worked Collar.

1049. MISS M. A. EDSON, *West Bridgewater.* Worsted-work.

1050. MRS. M. HALL, *Boston.* Two Specimens Patch-work.

1051. MRS. G. HOWE, *Cambridgeport.* Child's Apron, and Lace Collar. Very well done.

1054. WILLIAM M. OGDEN, *Boston.* Worsted-work.

1057. MISS H. B. PARKER, *Boston.* Case Knitting-work. Remarkably neat. *Bronze Medal.*

1058. MISS HELEN GRAY, *South Boston.* Silk Patch-work Quilt. Neatly done; general effect good. *Diploma.*

1063. MISS B. C. LYNCH, *Boston.* Frame Worsted Embroidery. One Lamp Mat.

1065. MISS MARIAN NEVILLE MAYERS. Frame of Bead-work. Very neatly done. Only specimen of the kind in the Exhibition. *Bronze Medal.*

1068. MRS. B. BRETT, *Boston.* Frame Worsted Embroidery. *Diploma.*

1069. MRS. E. M. HUNNEWELL, *Boston.* Knit Caps.

1070. MISS S. E. HUNNEWELL. Seed Bags, and Knit Shoes. Prettily done.

1071. Mrs. A. Wallace, *Boston.* Silk Embroidery on Flannel.

1072. Mrs. Hannah Jones, (aged 63 years,) *Melrose.* Hearth Rugs, made from rags. *Diploma.*

1073. Mrs. B. B. Russell, *Boston.* Silk Embroidery. Rag Rug. *Diploma.*

1074. Mrs. L. Brown, *Boston.* Three Pieces Knit Worsted-work. Jacket and Hood. Well done.

1076. Miss E. T. Plummer, *Newburyport.* Raised Worsted-work. Neatly done.

1077. Miss Phebe Newman, *Newburyport.* Worsted Crochet Rug. Very well done. *Diploma.*

1079. Miss E. M. Hack, *Wilmington, Mass.* One Knit Tidy.

1080. Miss L. Hack, *Wilmington, Mass.* One Knit Tidy. Worsted-work. Defective in coloring. Some parts good.

1087. Mrs. E. T. Mitchell, *Boston.* Raised Worsted-work, on Hair cloth.

1088. Miss Maria Mason, (aged 15 years,) *Boston.* Specimen Worsted-work.

1089. Mrs. Mary Ware, *Boston.* Embroidered Toilet Cushion. Execution neat.

1090. Miss Susan T. Farnsworth, *Bridgewater.* One Pair Wrought Worsted Suspenders. Neatly done.

1091. Mrs. J. Brown, *Boston.* Embroidered Pin Cushion.

1095. Mrs. H. Sawyer, *Charlestown.* Velvet Bell-pull. One Frame Worsted-work. Neat in execution, but coloring imperfect. *Diploma.*

1097. Mrs. C. McLellan, *Boston.* Worsted Chair Tidy.

1098. Mrs. L. C. Andrews, *Boston.* Knit Worsted Baby's Cap. Neatly done.

1100. Miss D. J. Merriam, *Newburyport.* Worsted-work, and Silk Embroidery.

1101. Miss M. E. Mann, *Chelsea.* Silk Block-work.

1102. Mrs. J. J. Bigelow, *Boston.* Three Potichomanie Vases. Excellent imitation of the India vases. *Bronze Medal.*

1103. Miss Mary Ames, *Boston.* One Bead Mat.

1105. Miss Julia Emmons, *Boston.* Specimen Chenille-work. Neat.

1106. Miss H. A. Sampson, *Boston.* Knit Shell-work Quilt. Regularly done.

1107. Mrs. Joshua P. Fuller. Wax-work.

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1109. Miss Katy Sylvesia, *Boston.* Worsted Mat.

1110. Mrs. E. W. Packard. Case Ladies' Dresses. Set Embroidered Collars and Skirts. Dress Embroidery. Neatly done.

1112. Miss M. E. Stearns, *Boston.* Shell Mirror and Bouquet. Well arranged.

1115. Miss J. Cummings, *Cambridgeport.* Three Tidies.

1116. Mrs. A. Cummings, *Cambridgeport.* Four Specimens Worsted-work. Neat.

1117. Miss Fanny Dickman, *Boston.* Frame Worsted Embroidery. Curtain very good.

1118. Miss Juliette Crabtree, *Boston.* Knit Quilt.

1120. Mrs. M. C. W. Hutchinson, *Boston.* Dress and Pillow Cases. Card Box and Candlestick. The two last are ingenious.

1121. Mrs. H. W. Baker. Raised-work Screen.

1122. Miss L. E. C. Boardman, (a blind person,) *South Reading.* Bead Baskets. *Bronze Medal.*

1123. Mrs. T. Means, *Boston.* Potichomanie Vase.

1124. Mrs. J. H. Woodford, *Boston.* Two Frames Worsted Embroidery. Neat.

1125. Miss M. L. Brewster, *South Boston.* Patch work Quilt, 4,000 pieces. Made by a child five years old. *Diploma.*

1126. Miss Angie Dwelle, *Quincy.* Two Frames Worsted Embroidery. Very meritorious. *Bronze Medal.*

1127. Miss E. E. Willey, *South Danvers.* Glass Case Wax Water Lilies. One Glass Case Wax Flowers. Good specimen of work. *Diploma.*

1128. Miss R. T. Garrett, *Boston.* Needle-work — Lady's Skirt.

1129. Mrs. Ruth Prescott, (80 years of age,) *Chelsea.* One Quilt, and Mittens. Remarkable for one of her years. Work very regular. *Bronze Medal.*

1132. Miss S. E. Mann, *South Boston.* Knit Shell-work Quilt.

1133. Miss C. A. Mann, *South Boston.* Lamp Mat. Very well done.

1138. Miss L. C. Hubbard, *Chelsea.* Frame Marine Moss-work. Beautifully done. *Diploma.*

1139. Miss Mary F. French, *Braintree.* Black Patch-work.

1140. Eloisa Lewis, *Dorchester.* Vase of Worsted Flowers. Well done, considering the circumstances.

1141. Mrs. R. Newell, *Brookline.* Knit Drawers. Eight Pairs Socks. Very neatly done. *Diploma.*

1143. Mrs. Luther Converse, (70 years of age,) *Woburn, Mass.* Shirt and Collar, made of remnants of cotton. Remarkable for one of her years. *Bronze Medal.*

1145. Samuel Vila, *Roxbury.* Tidy and Work Bag. Well done for a boy.

1146. Mrs. William Keith, *Boston.* Frame Raised Embroidery.

1147. Miss M. A. Haskins, *Boston.* Silk Quilt. Very regular.

1152. Mrs. Anna M. Walker, *Boston.* Patch-work Quilt.

1158. Miss M. E. Lovering, *Boston.* Embroidered Arm Chair. Very well done. *Bronze Medal.*

1160. Miss Mary Merrill, *Boston.* Chenille Head Dress.

1161. Mrs. C. H. Hersey, *South Boston.* Box Needle-work.

1162. Miss Sarah Gay, *South Boston.* Box Babies' Shoes. Neatly done.

1163. Mrs. S. D. F. Pierce, *Roxbury.* Two Specimens Raised Work.

1165. Mrs. E. S. Jackson, *Boston.* Rag Rug. Merit in execution, rather than arrangement. *Diploma.*

1166. Miss Julia L. Spear, *Boston.* Marine Moss-work.

1168. Miss Eliza Holland, *Boston.* Embroidered Smoking Cap.

1169. Miss Hannah Russell, *Boston.* Potichomanie Vase.

1171. Mrs. T. D. Smith, *Reading.* Two Pairs Knit Hose. Very well done.

1174. Miss Mary E. Little, *Boston.* Raised Work. Best specimen of this kind in the hall. *Diploma.*

1175. Mrs. E. B. Hersey, *Chelsea.* Knit Quilt.

1178. Miss M. E. Thayer, *Boston.* Lamp Mat.

1179. Mrs. P. Dodge, *Boston.* Specimen of Silk Embroidery.

1180. Mrs. M. E. Chase, *Boston.* Two Patch-work Quilts. Very well done.

1181. Miss Lucy Cushing, *Chelsea.* Wrought Skirt.

1182. Miss S. Park, *Chelsea.* Child's Quilt. Neatly done.

1183. Mrs. N. Fuller. Knit Quilt. Regularly executed. *Diploma.*

1185. Miss E. Brewer, *Boston.* Frame Worsted Embroidery. Smooth work; defective coloring.

1186. Mrs. E. G. Snow, *Boston.* Toilet Cushion. Two Scarfs.

1187. M. C. E. Sargent. Frame Raised-work.

1188. Mrs. H. J. Chambers, *East Medford.* Silk Embroidery. Fair specimen.

1189. Miss Lucy M. Larrabee, *Charlestown.* Silk Embroidery.

1190. Miss E. A. Higgins, *Somerville.* Tidy. Two Pairs Hose.

1191. Mrs. M. Sherman, *Chelsea.* Toilet Cushion. *Diploma.*

1194. Miss M. Davell, *Chelsea.* Knit Worsted Doll. Neatly done; good article for children.

1195. Miss D. M. Lang, *Boston.* Toilet Cushion.

1196. Miss Maria Weston, *Boston.* Toilet Cushion.

1197. Mrs. H. M. Johnson, *Boston.* Two Thibet Scarfs. Neatly made.

1198. Miss S. J. Coffin, *Newton.* Two Wrought Collars.

1201. Miss Eliza Allen, *Boston.* Chenille and Lace Head Dress.

1202. Miss Eliza Beals, *Boston.* Specimen Worsted-work.

1203. Miss Lucy Beals, *Boston.* Specimen Worsted-work.

1207. Miss E. Tileston, *Boston.* One Collar. Well done for a child eight years.

1209. Mrs. C. F. Cone, *Boston.* Table Mat.

1214. Three Tidies, and Babies' Socks. By the children of Mrs. A. W. Jackson, Chelsea. Very well made.

1215. Mrs. R. F. Putnam, *Boston.* Basket Wax Fruit.

1216. Miss Paulina Wiswall, *Boston.* Linen and Cotton Openwork Hose.

1217. Mrs. M. Smith, *Boston.* Leather Frame.

1221. Miss Roxanna Blanchard, *Medford.* One Quilt.

1223. Mrs. H. Libbey, *Boston.* Lamp Mat.

1224. Mrs. J. B. Parker, *Boston.* Two Tidies. Very neatly executed.

1225. Mrs. W. G. Taylor, *Boston.* One Tidy. Very fair specimen; best in the Exhibition. *Diploma.*

1227. Mrs. M. E. Hawks, *Boston.* Crochet Tidy. *Diploma.*

1231. Mrs. H. W. Stone, *Somerville.* Needle-work — Pocket Handkerchief. Very finely executed. *Diploma.*

1233. Miss E. A. Mason, (11 years old.) Frame Perforated Card-work.

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1234. Miss Mary A. Sweetser, *Chelsea*. Leather Frame and Marine Moss-work.

1235. Mrs. J. T. Weston, *West Cambridge*. Silk Embroidered Scarf.

1237. Mrs. William Hayman, *Boston*. Silk and Velvet Black Patchwork.

1240. Mrs. Mary A. Salvo, *Boston*. Silk Embroidered Piano Cover, in case. Very handsome. *Silver Medal.*

1241. Mrs. Lincoln Drake, *Easton, Mass*. Knit Shell-work Quilt.

1242. Miss Catharine Vila, *Roxbury*. Two Worsted Mats.

1245. Miss M. E. Niles, *Boston*. Case Millinery. Neatly made. *Diploma.*

1247. Miss E. Kimball, *Hingham*. Embroidered Slippers. Rather pretty.

1248. Miss Clarissa Barrett, *Chelsea*. Toilet Cushion and Two Mats.

1249. Mrs. Sarah S. Rice, *East Boston*. Needle-work Shirt.

1252. Miss E. M. Buckman, *Malden*. Pair Baby's Shoes. Neatly made.

1254. Miss Hannah E. Weeks, *Southborough*. Large Chair Tidy.

1256. Mrs. H. L. Cutting, *Melrose*. Glass-Bead Flower Basket. Very well done.

1257. Mrs. I. W. Marchant, *Boston*. Case of Embroidery. Very neatly done. *Diploma.*

1260. Mrs. E. B. Phillips, *Boston*. Silk Block-work Chair Cover. Tastefully arranged and neatly executed.

1261. Miss Abby Noyes, *Charlestown*. Two Worsted Mats.

1262. Miss Mary A. McKay, *South Reading*. Silk Embroidered Table Cover, and Frame Velvet Painting.

1264. Mrs. J. A. Polechio, (63 years of age,) *Boston*. Woollen Rug. Specimen of industry.

1266. Miss Sarah Fletcher, *Somerville*. One Lamp Mat.

1267. Mrs. N. F. Dodge, *Cambridgeport*. Frame Worsted Embroidery. *Silver Medal.*

1268. G. N. Beales, *Boston*. Three Shell Boxes. Well done.

1270. Mrs. Mary Schultze. Embroidered Fire Screen. Very handsome.

1272. F. P. Shumway, *Boston*. Case Fancy Zephyr Worsted-work. *Diploma.*

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1273. Mrs. H. Baer, *Boston.* Six Pairs Knit Open-work Hose. Very good.

1277. Mrs. A. Strong, *Boston.* Embroidered Infant's Skirt. Very smoothly done. *Diploma.*

1278. Mrs. J. Squire, *Boston.* Frame of Embroidery. An elaborate piece of work.

1279. Mrs. L. Rennington, *Boston.* Raised Embroidery on Haircloth.

1280. Mrs. H. H. Chase, *Boston.* Shell-work Mirror.

1281. Mrs. M. W. Hallstram, *Boston.* Frame Embroidery. An elaborate piece of work.

1283. Mrs. E. R. Jacobs, *Bangor, Maine.* Embroidered Table Cover. Needle-work Collar and Case. *Bronze Medal.*

1284. Miss E. L. Austin, *Boston.* Embroidered Piano Cover. Elaborate and showy. *Diploma.*

1285. Mrs. S. P. Jones, *South Boston.* Counterpane. Chief merit in the quilting. *Diploma.*

1287. Mrs. H. B. McLean, *East Boston.* Worsted Bed Coverlid. Strength and industry.

1289. Mrs. J. A. Wheaton, *Boston.* Patch-work Quilt. Specimen Patch-work, by her daughter, twelve years old. Well arranged.

1290. C. E. Fletcher, *Cambridgeport.* Leather Work Box.

1291. Miss E. F. L. Abbott, *Boston.* One Toilet Cushion. Embroidered Chair Cushion. Neatly executed.

1294. Miss L. W. Trull, *Boston.* Embroidered Screen. Very handsome.

1296. Mrs. S. Shattuck, *Boston.* Frame Embroidery.

1297. Mrs. J. P. Lakeman, *Boston.* Silk Embroidered Skirt.

1298. Miss S. M. Page, *Charlestown.* Two Specimens Embroidery.

1300. Mrs. T. R. Hawley. Two Potichomanie Vases. *Diploma.*

1302. Mrs. S. A. Parker, *Boston.* Quilted Counterpane. Neatly arranged.

1304. Miss M. P. Mason, *Boston.* Crochet Tidy. Fair specimen.

1305. Mrs. E. M. Farnsworth, *Chelsea.* Worsted Embroidery. Smoothly done.

1306. Miss C. Wiley, *Boston.* Three Tidies.

1307. Miss V. Shattuck, *Boston.* Frame Embroidery.

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1309. Mrs. J. S. White. Tape Collar.

1312. Mrs. H. L. Ferguson, *Boston.* Tape Tidy. Very pretty; new application of material.

1314. Mrs. P. E. Rollins, *Boston.* Two Tidies. One Collar. Neatly done.

1315. Mrs. M. W. Whitcomb, *Boston.* Tidy and Collar.

1316. Mrs. W. J. Neff, *Boston.* Box Corsets, Braces, Skirts, Supporters, &c. *Diploma.*

1318. Mrs. E. Blodgett, *Boston.* Crochet Tidy.

1320. Miss Medora Lane, *Chelsea.* Wrought Slipper Patterns. Three Mats. Two Tidies. Pair Worked Shoes.

1322. Miss B. Wiswall, *Boston.* Pair Silk Hose. Silk Mitts. Knit Gaiters. Pair Boy's Hose. Pair Ladies' Mittens. Close imitation of woven hose. Silk hose neatly executed.

1323. Miss M. J. Twitchell, *Boston.* Three Tidies.

1324. Mrs. E. Doane, *Boston.* Specimen Raised Embroidery.

1326. Miss G. W. Shattuck, *Boston.* Embroidered Tabouret.

1327. Mrs. L. Shattuck, *Boston.* Embroidered Tabouret.

1328. Miss L. Young, *Boston.* Two Frames Embroidery.

1329. Miss Mary A. Ford, (10 years of age.) Silk Patch-work, 1,575 pieces. General effect good. For industry, rather than execution of the work, the Committee award a *Diploma.*

1330. Mrs. Rebecca Goddard, *Boston.* Frame Embroidery. Pin Cushion, wrought in her seventy-third year, without pattern or mark. Rare and original. *Silver Medal.*

1331. Miss L. Ring, *Boston.* Frame Embroidery. Very regularly done; shading good. *Diploma.*

1332. William H. Page, *Charlestown.* Embroidery.

1333. Miss F. Himburger, *Boston.* Two Tidies. Very nice.

1334. S. H. Amsden, *Boston.* Patch-work Quilt, 575 pieces. Made by himself. General effect good. *Diploma.*

1336. Miss E. H. Stetson, *Boston.* Bag. Tidy. Two Collars.

1337. Mrs. E. Bancroft, *Boston.* Silk Embroidered Long Shawl. Talma. Slippers. Showy. *Diploma.*

1338. Mrs. C. C. Pelouze, *Boston.* Case of Embroidery. Very neat and pretty.

1339. **Miss C. Webster**, *Cambridge*. Two Specimens Cone Work. Very pretty.

1341. **Mrs. E. H. Saul**, *Salem*. Silk and Velvet Block-work. Table Cover.

1343. **Miss M. C. Coggshall**, *New Bedford*. Plain Sewing. Fair specimen.

1345. **Mrs. L. A. Bragg**, *Boston*. Frame Embroidery. Male figure easy and harmonious; neatly done. *Diploma.*

1346. **Mrs. James Barker**, *South Boston*. Worked Collar and Cuffs. Neatly executed.

1347. **Miss A. E. Barker**, *South Boston*. Specimen Lady's Work. *Diploma.*

1348. **Mrs. W. W. Mead**, *Belmont*. Potichomanie Vase. Arranged with taste.

1353. **Mrs. M. L. Moore**, *Boston*. Frame Embroidery.

1354. **Mrs. D. C. Kendall**, *South Boston*. Frame Embroidery. Deserving commendation. *Bronze Medal.*

1355. **Mrs. A. R. Coolidge**, *Cambridgeport*. Four Specimens Silk Embroidery. Worked Slippers. *Bronze Medal.*

1357. **Mrs. H. J. Bean**, *Charlestown*. Block-work Sofa Cushion.

1358. **Miss Mary Bell**, *Boston*. Table Cover.

1359. **Miss M. M. Francis**, *Cambridge*. Embroidered Chair.

1360. **Mrs. S. L. Raymond**, *Charlestown*. Patch-work. Quilted Counterpane.

1365. **Mrs. H. M. Copeland**, *Boston*. Anti-Macassar Tidy.

1367. **Mrs. A. Hitchcock**, *Cambridgeport*. Embroidered Mat. Neatly done.

1368. **Mrs. John Kimball**, *Salem*. Knit Counterpane. Very well done.

1370. **Madame M. L. Demorest**, *Boston*. Three Paper Pattern Dresses and Chart. *Diploma.*

1371. **J. L. Crosby & Co.**, *Boston*. Case Bonnets, &c. Very useful. Purple bonnet bearing away the palm. *Bronze Medal.*

1372. **Miss E. Vose**, (8 years of age.) Embroidery. Happy effort for childhood. *Diploma.*

1373. **Mrs. E. M. West**, *Somerville*. Patch-work Quilt.

1374. **Mrs. Martha Rupp**, *Boston*. Two Needle-work Collars. Neat.

1375. Miss Sarah M. Gale, *Boston.* Crochet Basket. Toilet Cushion. Fancy Work Bag.

1376. Mrs. E. B. Bowker, *Boston.* Three Tidies.

1377. Mrs. Annie Pratt, *Dorchester.* Child's Sack.

1381. Miss Fanny S. Twitchell, *Boston.* Worsted-work and Tidy.

1382. Miss Annie L. Eddis, *Boston.* Raised Worsted-work.

1386. Miss Mary Blanchard, *South Boston.* Lamp Mat.

1387. Miss Eliza C. Dickson, *Boston.* Embroidered Skirt. Very neatly done. *Diploma.*

1390. Mrs. A. Bowker, *Boston.* Specimen Block-work and Mat.

1392. Miss S. E. Taft, *West Roxbury.* Embroidered Skirt.

1393. Mrs. M. A. Webber, *Boston.* Embroidered Bag.

1394. Mrs. C. G. M. Newmarch, *Lynn.* Quilt. Neatly put together.

1395. Miss M. C. Seaver, *Washington.* Embroidered Handkerchief. Edge neatly done.

1396. Mrs. N. Williams, (84 years old,) *Roxbury.* Quilt. Knit by her in nine months. Very regular and neatly done. *Bronze Medal.*

1398. Miss J. A. Delaney. Case of Millinery.

1399. Miss J. F. Milliken, *Boston.* Collar and Box. Neat for a child.

1400. Miss L. Davis, *Boston.* Fancy Chair.

1400. Miss S. Lewis, *Boston.* Wrought Slipper Pattern.

1400. Mrs. Davis, *Boston.* Fancy Watch Case.

1403. R. H. Stearns & Co. Two Cases Hand-knit Worsted Goods. Very superior. One Case Whalebone Skirts. Very nice articles. *Bronze Medal.*

1411. Miss Almira Brown, *Weston.* Silk Skirt. Neatly quilted.

1413. Mrs. M. E. Hitching. Frame of Embroidery. Smoothly executed, but imperfectly colored.

1415. Mrs. Samuel Hall, *Boston.* Silk Embroidered Slippers.

1420. Miss Kate E. Boyd, *Mansfield, Mass.* Cone Basket. Neat.

1421. Miss Anna M. Knight. Toilet Cushion. Crochet Mat. Tidy. The latter very pretty.

1422. Miss Jane H. Taylor. Smoking Cap. Two Watch Cases.

1424. Miss M. Stephens. Leather-work Frame. Embroidery. Webster's head neatly executed.

1427. ss Mary G. Speare, *Neponset.* Black Velvet Cushion and Mat.

1428. Mrs. L. C. Pratt, *Boston.* Bed-spread. Woven by a hand-loom.
Bronze Medal.

1430. Mrs. M. B. Kneeland. Case Embroidery, Very well done.

1436. Mrs. A. W. Sturtevant, *Boston.* Needle-work Skirt.

1438. Mrs. H. G. Young, *Boston.* Needle-work Spread. Ingenious.

1439. Two Pin Cushions, made by the blind, South Boston. Very neat.
Bronze Medal.

1640. Mrs. M. L. Smith, *Boston.* Quilted Counterpane. Very fine; effect good.
Diploma.

1442. Winslow Fuller, (13 years of age,) *West Newton.* Cone Basket, made by himself. Neatly executed.

1444. Mrs. S. B. Cragin, *Chelsea.* Toilet Cushion, in case.
Diploma.

1445. Miss E. Deshon, *Boston.* Embroidered Mat.

1446. Miss O. M. Stockwell, *Boston.* Leather-work "What-not." Recent application.
Diploma.

1449. Mrs. J. P. Conner, *South Boston.* Frame Embroidery.

1451. Mrs. D. Thompson, *South Boston.* Two Camel's Hair Long Shawls.
Bronze Medal.

1454. Miss H. W. Merritt, *Boston.* Embroidered Vest Pattern. Neatly executed.

1455. Mrs. B. G. Boardman, Senr. Knit Quilt. Very regular, and neatly done.
Diploma.

1456. Mrs. M. G. Foster, *Boston.* Embroidered Talma and Cloth.
Diploma.

1458. Mrs. Charles Hastings, *Boston.* Child's Embroidered Dress.

1461. Miss S. Browne, *Hingham.* Toilet Cushion, Collar, and Embroidered Skirt.

1463. Mrs. E. Nye, *Boston.* Case of Embroidery.

1465. S. R. Nickerson, *Somerville.* Two Boxes Sewing Wax.

1466. Mrs. C. Williams, *Boston.* Case of Bonnets. Tasteful.
Diploma.

1469. Miss A. Clifford, *Boston.* Specimen Embroidery. Very good.

1470. Mrs. Susan W. Pratt, *Boston.* Frame Raised-work.

1471. J. H. Harrington. Case Millinery. Neat and showy.

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1473. Mrs. O. B. Hall, *Boston.* Case of Embroidery. Very creditable to a novice. Deserving a *Diploma.*

1479. Mrs. M. W. Lawrence, *Boston.* Lace Veil.

1480. Mrs. C. V. S. Wing, *Boston.* Worsted Cushion.

1481. Mrs. C. S. Wing, *Boston.* Two Cushions. One Pair Stockings. Superior specimen of knitting.

1482. Mrs. C. B. Brooks, *Boston.* Case Crochet Ring-work.

1483. Mrs. J. Delano, *Boston.* Toilet Cushion and Watch Case.

1484. Miss S. M. Shannon, *Chelsea.* Collar and Watch Case.

1487. Mrs. A. G. Keyes, *Boston.* Raised Embroidery.

1489. Mrs. T. Stephenson, *Boston.* Chenille-work. Neat.

1491. Mrs. L. D. Stephens, *Boston.* Two Ottomans.

1493. Miss M. E. Tingley, *Providence, R. I.* One Collar. Close resemblance to Honiton. *Bronze Medal.*

1496. Miss C. Vose, *Boston.* Tidy and Collar.

1498. Mrs. H. Benner, *Boston.* Case Millinery.

1499. Mrs. S. S. Somerby, *Roxbury.* Cradle Quilt. Very regular piece of work.

1502. Mrs. G. A. O. Pierce, *Roxbury.* Four Toilet Cushions.

1506. Miss M. Armstrong, *Roxbury.* Lamp Mat.

1507. Miss A. F. Lawson, *Boston.* Sixteen Needle-books.

1511. Mrs. S. P. Davis, *Salem.* Embroidered Skirt.

1528. Miss R. W. Ketchum, (7 years old.) Tidy. Very well for the age.

1529. Mrs. Henry D. Wilmarth, *Boston.* Sofa Pillow.

1530. Miss Mary A. Hawkes, *Chelsea.* Lamp Mat.

1531. Miss M. J. Hayden, (10 years of age,) *Somerville.* Wrought Slippers.

1532. Madame Pierrot. Case Muslin Embroidery. Beautifully executed. *Silver Medal.*

1534. Mrs. G. R. Clark, *Boston.* Case Bonnets and Flowers.

1535. Miss M. W. Frothingham, *Charlestown.* Wrought Handkerchief. Neatly done.

1539. Mrs. Nathaniel Tarr, *Boston.* Rag Hearth Rug. *Diploma.*

1540. Master Albert Henry, *Boston.* Frame of Embroidery. General effect good.

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1543. Miss H. P. Hildreth, *Dorchester*. Specimen of Embroidery.

1545. Mrs. Emily Carpenter, *Norton*. Embroidered Light Stand. Very beautifully done. *Bronze Medal.*

1547. Miss J. E. Edwards, *Charlestown*. Frame Crochet-work. *Diploma.*

1548. Miss Sarah Goff, *Boston*. Crochet Lamp Mat.

1551. Mrs. F. Doane, *Boston*. Three Mats. One Collar.

1552. Miss E. Smith, *Somerville*. One Tidy.

1553. Mrs. A. Swallow, *Boston*. Needle-work Shirt.

1564. Miss F. M. Hitchins, *Boston*. Embroidered Scarf.

1565. Mrs. E. N. Bird, *Boston*. Two Frames Embroidery.

1568. Mrs. D. L. Dearborn, *Cambridgeport*. One Wrought Quilt. Very well done. *Diploma.*

1573. Miss M. Wilson, *Charlestown*. Three Specimens Silk Patchwork. Rather neat.

1574. Mrs. L. B. Emerson, (62 years of age,) *Cambridge*. Leather-work Frame. Well arranged; displaying taste.

1575. Miss S. J. Clark. Potichomanie Vase.

1576. Mrs. R. W. Holman, *Newton*. Potichomanie Vase. Very fair.

1577. Miss J. Cutter, *Boston*. Pin Cushion.

1578. Miss A. L. Moore, *Boston*. Worsted-work.

1579. Miss O. P. Gilbreth, *Boston*. Embroidered Cape.

1580. Mrs. E. Cutler, *Boston*. Fancy Embroidered Chair.

1581. Miss C. Wheeler, *Boston*. Embroidered Mantle and Blanket.

1583. Miss A. F. Milliken, (17 years of age,) *Boston*. Specimen of work.

1585. Mrs. S. Wilson, *Boston*. Two Mats.

1591. Miss H. A. R. Hatch, *Charlestown*. Two Baskets Wax Fruit and Flowers. Beautiful specimens. *Bronze Medal.*

1593. Miss Jane Watson, *East Boston*. Wrought Collar. Neatly done.

1594. Mrs. A. Farrar, *Boston*. Three Mats. Neatly done.

1595. Mrs. E. Wellington, *Charlestown*. Frame of Embroidery. Neatly executed.

1596. Miss L. M. Wellington, *Charlestown*. Tidy.

1597. Mrs. Parker P. Tirrell, *Charlestown*. Embroidery — 170,000 stitches.

1598. Mrs. George Swan, *Charlestown*. Embroidered Tabouret.

1601. Miss E. M. Wilson, *Charlestown*. Embroidered Collar.

1602. Miss M. E. Noyes, *Charlestown*. Quilted Counterpane. Neatly arranged and executed. *Diploma.*

1603. Miss Annie Ireland, *Boston*. Knit Quilt. Very elaborate piece of work.

1607. Mrs. E. L. West, *Boston*. Two Potichomanie Vases.

1608. Mrs. O. W. Bartlett, *Charlestown*. Patch-work Quilt.

1609. Mrs. M. Horsman, *Boston*. Masonic Apron.

1612. Miss C. Wheeler, *Boston*. Frame Embroidery.

1613. Miss Lizzie J. Clapp, *Medford*. Raised Work.

1615. Miss E. A. Rich, *Watertown*. Specimen Wax-work.

1616. Miss L. Stone, *Boston*. Basket Wax Fruit.

1617. Miss E. Gilbert, *Boston*. Lamp Mat.

1618. Miss M. A. Pettengill, *Lawrence*. Wax-work.

1619. Mrs. J. Stone, *Boston*. Globe — Wax-Work.

1625. Madame Longhurst, *Boston*. Two Dressed Models. Two Wax Busts. One Tree Paper Fashions. *Diploma.*

1632. Knit Quilt. Very well done.

1639. Miss E. Sparrow, *Cambridgeport*. Embroidered Sofa Pillow. Rather pretty.

1640. Miss S. Sparrow, *Cambridgeport*. Crochet Tidy.

1641. Miss Abby McLeman, *South Boston*. Tidy and Lamp Mat. Neat.

1642. Mrs. J. C. Elms, *Boston*. Patch-work Quilt. General effect good. Sewing neatly done.

1643. Charles Neale, (seaman,) *Boston*. Frame Needle-work. Made of yarn, by himself, on board a ship. *Diploma.*

1644. Miss E. Pedder, *Roxbury*. Toilet Cushion. Neatly executed. Showing ingenuity in the application of leather-work.

1647. Mrs. C. M. Gage, *Boston*. Wrought Skirt.

1650. Mrs. Josiah Richardson, *Roxbury*. Knit Shell-work Quilt. Work regular; border, new application. *Bronze Medal.*

1651. Mrs. John Kennedy, *East Boston*. Raised Work. Hair-cloth Tabouret.

1652. Mrs. W. H. Manning, *Rockport*. Quilted Counterpane. Very handsomely done. *Diploma.*

1657. S. A. Stearns, *Boston*. Worsted-work on hair-cloth.

1662. Miss S. F. Lovejoy, (13 years of age.) Raised Embroidery.

1664. Mrs. Thomas Warren, (76 years of age,) *Townsend*. Rug, made of cloth. Useful and neat.

1665. Miss M. A. Hodgkins, *Ipswich*. Crotchet Mat.

1675. Miss Charlotte Thompson, *Charlestown*. Wax Fruit and Flowers. Tastefully arranged; well executed. *Bronze Medal.*

1678. Mrs. B. B. Taylor, *Rochester*. Banner Quilt — Flags of all Nations. An ingenious piece of work. *Bronze Medal.*

1681. Mrs. Stimpson's beautiful specimen.

1683. Miss Fidelia Silverheels, (an Indian of the Seneca Tribe,) *Irving, N. Y.* Bead Cushion. Very neatly arranged and executed. *Diploma.*

1684. Mrs. Dolly Spaulding, *Proctorsville, Vt.* Frame Embroidery, by an old lady. *Bronze Medal.*

1686. Miss S. G. Taylor, *Cambridge*. Large Doll. Tastefully dressed.

1692. Mrs. M. H. Hallstram, *Boston*. Embroidered Chair. Very pretty.

1694. Mrs. James E. Spear, *Boston*. Quilt. *Diploma.*

1695. Miss Mary E. Cutter, *Boston*. Turkish Sofa Pillow. Very well done.

1698. Miss S. Goodridge, *Boston*. Flannel Embroidery.

1699. Miss Phebe B. Cathill, *New Bedford*. Tape Trimming Collar. *Diploma.*

1700. Miss S. A. Murch, *Chelsea*. Path-work Quilt.

1703. Mrs. Mary Jones, *Cambridgeport*. Silk and Velvet Hegaga Ottoman.

1714. Madame C. Miel. Wax Flowers. Exquisite Specimen. *Diploma.*

1715. Mrs. J. C. French. Frame Embroidery. Beautifully executed; bird in particular. *Bronze Medal.*

1720. Miss H. M. Brewer, (8 years of age,) *Boston*. Pair Linen Frilled Pillow-cases. Remarkably well done. *Bronze Medal.*

1725. Miss Mary A. Tower. Head of Webster. Beautifully executed. *Bronze Medal.*

1730. Mrs. S. J. Homer, *Boston.* Two Potichomanie Vases. Beautifully done. *Diploma.*

1732. Miss A. K. Davis, *Charlestown.* Block-work Chair.

1734. Mrs. M. A. Murdock, *Boston.* Case Knit Worsted-work. Highly creditable to her taste and ingenuity. *Bronze Medal.*